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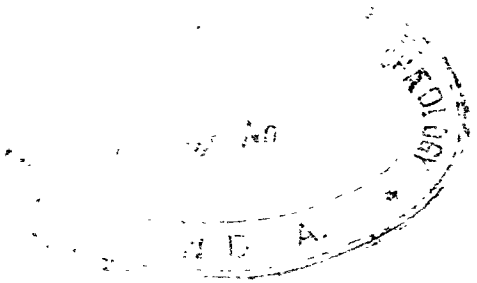
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OF THE

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SESSION

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(Instituted 1874, in terms of a Bequest for its endowment by the late ALEXANDER HENRY RHIND *of Sibster, Hon. Mem. S.A. Scot.)*

SESSION 1904–1905.

RHIND LECTURER IN ARCHÆOLOGY—F. HAVERFIELD, M.A., LL.D.

5. Honorary Fellows shall consist of persons eminent in Archæology, who must be recommended by the Council, and balloted for in the same way as Fellows; and they shall not be liable for any fees of admission or annual subscriptions. The number of Honorary Fellows shall not exceed twenty-five.

6. Corresponding Members must be recommended by the Council and balloted for in the same way as Fellows, and they shall not be liable for any fees of admission or annual subscriptions.

7. Ladies who have done valuable work in the field of Archæology may be admitted as Lady Associates. The number of Lady Associates shall not exceed twenty-five. They shall be proposed by the Council, and balloted for in the same way as Fellows, and shall not be liable for any fees of admission or annual subscriptions.

8. Before the name of any person is added to the List of Fellows, such person shall pay to the funds of the Society Two Guineas as an entrance fee and One Guinea for the current year's subscription, or may compound for the entrance fee and all annual subscriptions by the payment of Twenty Guineas at the time of admission. Fellows may compound for future annual subscriptions by a single payment of Fifteen Guineas after having paid five annual subscriptions; or of Ten Guineas after having paid ten annual subscriptions.

9. The subscription of One Guinea shall become due on 30th November in each year for the year then commencing; and if any Fellow who has not compounded shall fail to pay the subscription for three successive years, due application having been made for payment, the Treasurer shall report the same to the Council, by whose authority the name of the defaulter may be erased from the List of Fellows.

10. Every Fellow not being in arrears of the annual subscription shall be entitled to receive the printed Proceedings of the Society from the date of election.

11. None but Fellows shall vote or hold any office in the Society.

12. Subject to the Laws and to the control of the Society in General Meetings, the affairs of the Society shall be managed by a Council elected and appointed as hereinafter set forth. Five Members of the Council shall be a quorum.

13. The Office-Bearers of the Society shall consist of a President, three Vice-Presidents, two Secretaries for general purposes, two Secretaries for Foreign Correspondence, a Treasurer, two Curators of the Museum, a Curator of Coins, and a Librarian. The President shall be elected for a period of five years, and the Vice-Presidents for a period of three years. One of the Vice-Presidents shall retire annually by rotation and shall not again be eligible for the same office until after the lapse of one year. All the other office-bearers shall be elected for one year and shall be eligible for re-election.

14. In accordance with the agreements subsisting between the Society and the Government, the Board of Manufactures shall be represented on the Council by two of its Members (being Fellows of the Society) elected annually by the Society. The Treasury shall be represented on the Council by the King's and Lord Treasurer's Remembrancer (being a Fellow of the Society).

15. The Council shall consist of the Office-Bearers, the three representative Members above specified, and nine Fellows, elected by the Society.

16. Three of the nine elected Members of Council shall retire annually by rotation, and shall not again be eligible till after the lapse of one year. Vacancies among the elected Members of Council and Office-Bearers occurring by completion of term of office, by retirement on rotation, by resignation, by death or otherwise, shall be filled by election at the Annual General Meeting. The election shall be by Ballot, upon a list issued by the Council for that purpose to the Fellows at least fourteen days before the Meeting.

17. The Council may appoint committees or individuals to take charge of particular departments of the Society's business.

LAWS

OF THE

SOCIETY OF ANTIQUARIES OF SCOTLAND,

INSTITUTED NOVEMBER 1780 AND INCORPORATED BY ROYAL CHARTER 6TH MAY 1783.

(Revised and adopted November 30, 1901.)

1. The purpose of the Society shall be the promotion of ARCHÆOLOGY, especially as connected with the investigation of the ANTIQUITIES AND HISTORY OF SCOTLAND.

2. The Society shall consist of Fellows, Honorary Fellows, Corresponding Members, and Lady Associates.

3. Candidates for admission as Fellows must sign the Form of Application prescribed by the Council, and must be proposed by a Fellow and seconded by two Members of the Council. Admission shall be by ballot.

4. The Secretaries shall cause the names of the Candidates and of their Proposers to be inserted in the billet calling the Meeting at which they are to be balloted for. The Ballot may be taken for all the Candidates named in the billet at once; but if three or more black balls appear, the Chairman of the Meeting shall cause the Candidates to be balloted for singly. Any Candidate receiving less than two-thirds of the votes given shall not be admitted.

18. The Annual General Meeting of the Society shall take place on St Andrew's Day, the 30th of November, or on the following day if the 30th be a Sunday.

19. The Council shall have power to call Extraordinary General Meetings when they see cause.

20. The Ordinary Meetings of the Society shall be held on the second Monday of each month, from December to May inclusive.

21. Every proposal for altering the Laws must be made through the Council; and the Secretaries, on instructions from the Council, shall cause intimation thereof to be made to all the Fellows at least one month before the General Meeting at which it is to be determined on.

Form of Special Bequest.

I, A. B., do hereby leave and bequeath to the Society of Antiquaries of Scotland incorporated by Royal Charter, my collection of , and I direct that the same shall be delivered to the said Society on the receipt of the Secretary or Treasurer thereof.

General Form of Bequest

I, A. B., do hereby leave and bequeath to the Society of Antiquaries of Scotland incorporated by Royal Charter, the sum of £ sterling [*to be used for the general purposes of the Society*] [or, *to be used for the special purpose, or object, of*], and I direct that the said sum may be paid to the said Society on the receipt of the Treasurer for the time being

LIST OF THE FELLOWS

OF THE

SOCIETY OF ANTIQUARIES OF SCOTLAND.

NOVEMBER 30, 1905.

PATRON.

HIS MAJESTY THE KING.

1879 ABERCROMBY, Hon. JOHN, 62 Palmerston Place.

1853 *ABERDEIN, FRANCIS, Garvocklea, Laurencekirk.

1896 *ADAM, FRANK, c/o The Straits Trading Co., Kuala Lumpur, Selangor, Federated Malay States, Straits Settlements.

1898. ADAM, STEPHEN, 199 Bath Street, Glasgow.

1889. AGNEW, ALEXANDER, Procurator-Fiscal, Balwherrie, Dundee.

1899. AGNEW, Sir ANDREW N., Bart., M.P., Lochnaw Castle, Stranraer.

1884. AGNEW, Sir STAIR, K.C.B., M.A., 22 Buckingham Terrace.

1898 AIKMAN, HENRY ERSKINE, 5 Princes Square, Glasgow

1892. AILSA, The Most Hon. The Marquis of, Culzean Castle, Maybole

1884. AITKEN, GEORGE SHAW, Architect, 49 Queen Street.

1892. AITKEN, JAMES H., Gartcows, Falkirk.

1905. ALEXANDER, R. S., Grant Lodge, 18 Lomond Road, Trinity.

1886. ALEXANDER, W. LINDSAY, Pinkieburn, Musselburgh.

1897. ALLAN, Rev. ARCHIBALD, Channelkirk Manse, Oxton, Berwickshire.

1900. ALLARDYCE, Col. JAMES, LL.D., of Culquoich, 3 Queen's Terrace, Aberdeen.

1864 *ANDERSON, ARCHIBALD, 30 Oxford Square, London, W.

1884 ANDERSON, CHARLES M., Gardenhurst, Gedgeley Park, Prestwich, Manchester.

1889. ANDERSON, JAMES, Carronvale, Wardie Road.

1897. ANDERSON, Capt. J. H., 2nd East Lancashire Regiment, c/o Messrs Cox & Co., 16 Charing Cross, London.

1902 *ANDERSON, Major ROBERT D., Ingleneuk, Paignton, Devon.

1871 *ANDERSON, Sir ROBERT ROWAND, LL.D., H.R.S.A., Architect 16 Rutland Square.

An asterisk (*) denotes Life Members who have compounded for their Annual Contributions.

1894 ANDERSON, WILLIAM, Arns Brae, Bearsden, Dumbartonshire.

1887 ANDERSON-BERRY, DAVID, M.D., F.R.S.E., 23 Grosvenor Crescent, St Leonards-on-Sea.

1894 ANGUS, ROBERT, Craigston House, Lugar, Ayrshire.

1882. ANNANDALE, THOMAS, M.D., D.C.L., Professor of Clinical Surgery, University of Edinburgh, 34 Charlotte Square.

1900. ANSTRUTHER, Sir RALPH W., Bart., of Balcaskie, Pittenweem.

1897. ANSTRUTHER-THOMSON, WILLIAM, Major, Royal Horse Guards, Kilmany, Fife.

1885. ARDWALL, The Hon. Lord, LL.D., 14 Moray Place.

1901 ARGYLE, His Grace The Duke of, K.T., LL.D., Inveraray Castle, Inveraray.

1878.*ARMSTRONG, ROBERT BRUCE, 6 Randolph Cliff.

1904. ARNOLF, Brigade Surgeon, Lieut.-Col. JAMES, M.D., 8 Rothesay Place.

1901. ARTHUR, ALEXANDER THOMSON, Physician, Blair Devenick, Cults, Aberdeen.

1904. ARTHUR, Sir MATTHEW, Bart., of Carlung, Fullarton, Troon.

1889. ATHOLL, His Grace The Duke of, K.T., Blair Castle, Blair Atholl.

1868.*BAIN, JOSEPH, Blyn Dewi, St David's, S. Wales.

1889 BAIN, WILLIAM, 42 Moray Place, Edinburgh.

1892. BAIN, WILLIAM, Lochmaddy, by Oban.

1900.*BAIRD, JOHN G. ALEXANDER, M.P., of Wellwood and Adamton, Monkton, Ayrshire.

1891. BAIRD, WILLIAM, Clydesdale Bank, Portobello.

1901.*BALCARRES, The Right Hon. Lord, M.P., 74 Brook Street, London.—*Vice-President.*

1883. BALFOUR, CHARLES BARRINGTON, M.P., of Newton Don, Kelso.

1885. BALFOUR, Major FRANCIS, Fernie Castle, Collessie, Fife.

1903. BALFOUR, The Hon. JAMES MONCREIFF, 6 Rothesay Terrace.

1876. BALLANTINE, ALEXANDER, 42 George Street.

1897 BANNERMAN, W. BRUCE, F.S.A., The Lindens, Sydenham Road, Croydon.

1890. BANNERMAN, WILLIAM, M.A., M.D., West Park, 30 Polwarth Terrace.

1896. BARBOUR, JAMES, Architect, St Christopher's, Dumfries.

1897. BARCLAY-ALLARDICE, ROBERT, M.A., Rosehill, Lostwithiel, Cornwall.

1899. BARNARD, FRANCIS PIERREPONT, M.A. Oxon., Bilsby House, near Alford, Lincolnshire.

1897. BARNETT, Rev. T. R., St Andrew's Manse, Boness.

1880. BARRON, JAMES, Editor of *Inverness Courier*, Inverness.

1891 BAXTER, Rev. GEORGE CHALMERS, U.F.C. Minister, Cargill, Guildtown, Perth.

1891.*BAYNE, THOMAS, 69 West Cumberland Street, Glasgow.

1877. BEAUMONT, CHARLES G., M.D., Old Manor House, Epsom, Surrey.

1889 BEDFORD, Major CHARLES HENRY, D.Sc., M.D., Roscommon Castle, Kasauli, Punjab, India.

1903. BEDFORD, J. G. HAWKSLEY, Briercliffe, Filey Road, Scarborough.

1903. BELL, R. FITZROY, Advocate, of Temple Hall, Coldingham, 7 Amslie Place.

1889. BELL, THOMAS, of Belmont, Hazelwood, Broughty Ferry.

1877. BELL, WILLIAM, 181 Queen Victoria Street, London, E.C.

1890.*BEVERIDGE, ERSKINE, LL.D., St Leonard's Hill, Dunfermline.

1886.*BEVERIDGE, HENRY, Pitreavie House, Dunfermline.

1891. BEVERIDGE, JAMES, Church of Scotland's Training College, 4 Blythswood Drive, Glasgow.

1895.*Bilsland, William, 45 Hydepark Street, Glasgow.
1877.*Bilton, Lewis, W.S., 5 Abinger Gardens.
1891. Bird, George, 33 Howard Place.
1882. Black, William George, Ramoyle, Dowanhill Gardens, Glasgow.
1847.*Blackie, Walter G., Ph.D., LL.D., 1 Belhaven Terrace, Kelvinside, Glasgow
1885. Blaikie, Walter Biggar, 6 Belgrave Crescent.
1891. Blair, Rev. William, M.A., D.D., Leighton Manse, Dunblane.
1879. Blanc, Hippolyte J., R.S.A., Architect, 25 Rutland Square
1901. Blythswood, The Right Hon. Lord, Blythswood, Renfrew.
1887. Bogie, Alexander, Banker, 48 Lauder Road
1885. Bompas, Charles S. M., 121 Westbourne Terrace, London.
1880.*Bonar, Horatius, W.S., 3 St Margaret's Road.
1904.*Bontein, James Shelley, J.P., of Glencruitten, Oban
1898. Borland, Rev. R., Minister of Yarrow, Selkirkshire.
1903. Borthwick, Henry, Borthwick Castle, Midlothian.
1899. Boswall, James Donaldson, W.S., Donaldson House, Wardie
1893. Boyle, The Hon. Robert E., Colonel, 95 Onslow Square, London.
1884. Boynton, Thomas, Norman House, Bridlington Quay, Hull.
1883. Brand, David, Sheriff of Ayrshire, 42 Coates Gardens
1891. Brand, James, C.E., 10 Marchmont Terrace, Kelvinside, Glasgow.
1884.*Breadalbane, The Most Hon. The Marquess of, K.G., Taymouth Castle.
1887. Brook, Alexander J. S., 21 Chalmers Street,—*Curator of Museum.*
1904. Brook, Edward J., of Hoddom Castle, Ecclefechan
1878. Broun-Morison John Broun, of Finderlie, Mutie House, Errol.
1902. Brown, Charles, Dundas Lodge, Kerse, Falkirk
1887. Brown, George, 2 Spottiswoode Street.
1884 Brown, G. Baldwin, M.A., Professor of Fine Art, University of Edinburgh, 50 George Square.
1902. Brown, P. Hume, M.A., LL.D., Fraser Professor of Ancient History and Palæography, University of Edinburgh, 20 Corennie Gardens
1897. Brown, Richard, C.A., 22 Chester Street
1884. Browne, Right Rev. G. F., D.D., The Palace, Redland Green, Bristol.
1882 Browne, George Washington, R.S.A., Architect, 8 Albyn Place
1892 Bruce, George Waugh, Banker, Leven Fife.
1882. Bruce, James, W.S., 59 Great King Street
1893. Bruce, John, Inverallan, Helensburgh.
1898.*Bruce, John, of Sumburgh, Shetland.
1880 Bruce, Rev. William, B.D., Dunnmarle, Culross
1896. Bruce, William Balfour, Allan View, Dunblane.
1905. Bruce, The Right Hon. The Lord, Broomhall, Dunfermline.
1902 Bryce, Thomas H., M.A., M.D., 2 Granby Terrace, Glasgow
1889 Bryce, William Moir, 11 Blackford Road.
1896. Buchan, Alexander, LL.D., Secretary, Scottish Meteorological Society, 42 Heriot Row.
1899.*Buchan, William, Town Clerk of Peebles.
1885.*Buchanan, Thomas Ryburn, M.A., M.P., 12 South Street, Park Lane, London, W
1905 Burgess, Francis, 27 Lechmere Road, Willesden Green, London.
1887.*Burgess, Peter, Craven Estates Office, Coventry
1882. Burnet, John James, A.R.S.A., Architect, 18 University Avenue, Hillhead Glasgow.

1892. BURNETT, Rev. J. B., B.D., The Manse, Fetteresso, Stonehaven.
1897. BURN-MURDOCH, W. G., Arthur Lodge, 60 Dalkeith Road
1887. BURNS, Rev. THOMAS, Croston Lodge, Chalmers Crescent.
1905. BURR, Rev. G. F., Highfields Park, Halesowen, Worcestershire.
1889. BURR, Rev. P. LORIMER, D.D., Manse of Lundie and Fowlis, Dundee.
1901. BUTE, The Most Hon. The Marquess of, Mount Stuart, Rothesay.
1901. BUTLER, C. M'ARTHUR, Secretary of the Society of Architects, St James's Hall, Piccadilly, London, W.

1898. CADENHEAD, JAMES, A.R.S.A., R.S.W., 15 Inverleith Terrace.
1880. CALDWELL, JAMES, Craigielea Place, Paisley.
1898. CALLANDER, JOHN GRAHAM, Benachie Distillery, by Insch, Aberdeenshire.
1887. CAMERON, J. A., M.D., Firhall, Nairn.
1890. CAMERON, RICHARD, 1 St David Street.
1905. CAMERON-SWAN, DONALD, Craigbhan, Mayfield Road, Sanderstead, Surrey.
1902. CAMPBELL, The Right Hon. Lord ARCHIBALD, J.P., D.L., Coombe Hill Farm, Kingston-on-Thames
1899. CAMPBELL, ARCHIBALD, Park Lodge, 62 Albert Drive, Pollokshields, Glasgow.
1886. CAMPBELL, SIR DUNCAN ALEXANDER DUNDAS, Bart., of Barcaldine and Glenure, 16 Ridgeway Place, Wimbledon
1865. *CAMPBELL, Rev. JAMES, D.D., The Manse, Balmerino, Fifeshire.
1874. *CAMPBELL, Right Hon. JAMES A., LL.D., M.P., of Stracathro, Brechin.
1901. CAMPBELL, Lieut.-Col. JOHN, 30 Waterloo Place.
1904. CAMPBELL, JOSEPH D., Solicitor, 142 West George Street, Glasgow.
1882. *CAMPBELL, PATRICK W., W.S., 25 Moray Place.
1883. CAMPBELL, WALTER J. DOUGLAS, of Innis Chonain, Loch Awe.
1877. *CAMPBELL-BANNERMAN, Right Hon. Sir HENRY, G.C.B., LL.D., M.P., Belmont Castle, Meigle.
1901. CARFRAE, GEORGE, 77 George Street.
1891. CARMICHAEL, JAMES, of Arthurstone, Ardler, Meigle.
1888. *CARMICHAEL, Sir THOMAS D. GIBSON, Bart., Malleny, Balerno.
1901. *CARNEGIE, ANDREW, LL.D., of Skibo, Skibo Castle, Dornoch.
1905. CARNEGIE, Major D. C. S. LINDSAY, 6 Playfair Terrace, St Andrews.
1871. *CARTWRIGHT, THOMAS LESLIE MELVILLE, Melville House, Collessie, Fife.
1896. CAW, JAMES L., Curator of Scottish National Portrait Gallery, Queen Street.
1901. CAWDOR, The Right Hon. Earl, Stackpole Court, Pembroke.
1890. CHALMERS, P. MACGREGOR, Architect, 95 Bath Street, Glasgow.
1889. CHATWIN, J. A., Wellington House, Edgbaston, Birmingham.
1895. CHISHOLM, A. W., Goldsmith, 7 Claremont Crescent.
1903. CHISHOLM, EDWARD A., 43 Comely Bank Road.
1901. CHRISTIE, Miss ELLA R., 19 Buckingham Terrace, and Cowden, Dollar
1898. CHRISTIE, Rev. J. G., B.D., Minister of Helensburgh.
1882. CHRISTISON, DAVID, M.D., 20 Magdala Crescent,—*Vice-President*.
1902. CLARK, ARCHIBALD BROWN, M.A., University Lecturer on Economic History, 16 Comely Bank Street
1889. CLARK, DAVID R., M.A., 8 Park Drive West, Glasgow.
1885. CLARK, GEORGE BENNET, W.S., 15 Douglas Crescent.
1905. CLARK, JAMES, Advocate, 10 Drumsheugh Gardens.
1871. *CLARK, Sir JOHN FORBES, Bart., LL.D., of Tillypronie, Aberdeenshire
1896. CLARK, THOMAS BENNET, C.A., Newmills House, Balerno.

1879 CLELAND, JOHN, M.D., LL.D., Professor of Anatomy, University of Glasgow.

1903. CLEPHAN, ROBERT COLTMAN, Marine House, Tynemouth.

1880. CLOUSTON, THOMAS S., M.D., Tipperlinn House, Morningside Place.

1905. CLYDE, JAMES AVON, K.C., Solicitor-General for Scotland, 27 Moray Place.

1891. COATS, Sir THOMAS GLEN, Bart., of Ferguslie, Paisley.

1901.*COCHRAN-PATRICK, Mrs ELLA A. K., Woodside, Beith.

1898. COCHRAN-PATRICK, NEIL J. KENNEDY, of Woodside, Advocate, 34 Heriot Row.

1895. CORRIE, ADAM J., 5 Neville Park, Tunbridge Wells.

1901. COURTNEY, CHARLES J., Librarian, Minet Public Library, Knatchbull Road, London, S.E.

1891. COUTTS, Rev. ALFRED, B.D., 8 John's Place, Leith.

1879.*COWAN, Rev. CHARLES J., B.D., Morebattle, Kelso.

1887. COWAN, JOHN, W.S., St Roque, Grange Loan.

1888 COWAN, WILLIAM, 47 Braid Avenue.

1893.*COX, ALFRED W., Glendoick, Glencarse, Perthshire.

1899. COX, BENJAMIN C., Largo House, Largo, Fife.

1901.*COX, DOUGLAS H., 34 Drumsheugh Gardens.

1882. CRABBIE, GEORGE, 8 Rothesay Terrace.

1892. CRAIG-BROWN, T., Woodburn, Selkirk.

1900. CRAN, JOHN, 11 Brunswick Street.

1880.*CRAN, JOHN, Kirkton, Inverness.

1903. CRAWFORD, DONALD, M.A., Advocate, Sheriff of Aberdeen, 35 Chester Street.

1861.*CRAWFURD, THOMAS MACKNIGHT, of Cartsburn.

1905. CREE, JAMES EDWARD, Tusculum, North Berwick.

1889. CROMBIE, Rev. JAMES M., The Manse, Cote des Neiges, Montreal, Canada.

1886. CROSS, ROBERT, 13 Moray Place.

1891. CULLEN, ALEXANDER, Architect, Brandon Chambers, Hamilton.

1904. CUNNINGHAM, D. J., D.C.L., LL.D., M.D., Professor of Anatomy, University of Edinburgh, 18 Grosvenor Crescent.

1903. CUNNINGHAM, HENRY J., Worcester College, Oxford.

1891. CUNNINGHAM, JAMES HENRY, C.E., 2 Ravelston Place.

1893. CUNNINGTON, B. HOWARD, Devizes.

1893. CURLE, ALEXANDER O., W.S., 8 South Learmouth Gardens,—*Secretary.*

1889.*CURLE, JAMES, jun., Priorwood, Melrose.—*Librarian.*

1886.*CURRIE, JAMES, jun., Larkfield, Golden Acre.

1884. CURRIE, WALTER THOMSON, of Tryla w, Cupar-Fife.

1879.*CURSITER, JAMES WALLS, Albert St., Kirkwall.

1879. DALGLEISH, J. J., Brankston Grange, Stirling.

1901. DALKEITH, The Right Hon. Earl of, M.P., Eildon Hall, St Boswells.

1893. DALRYMPLE, Sir CHARLES, Bart., M.P., Newhailes, Mid-Lothian.

1883. DALRYMPLE, Hon. HEW HAMILTON, Lochinch, Wigtownshire.

1880. DALRYMPLE, J. D. G., Meiklewood, Stirling.

1872.*DAVIDSON, HUGH, Procurator-Fiscal, Braedale, Lanark.

1886.*DAVIDSON, JAMES, Solicitor, Kirriemuir.

1903. DEAS, A. ORR, LL.B., Advocate, 7 Forres Street.

1901 DEWAR, T. W., of Harperfield, Sandilands, Lanarkshire.

1901. DICK, Rev. JAMES, Blackwood, Auldgirth, Dumfriesshire.

1898. DICK, Rev. ROBERT, Colmsburgh, Fife.

1895. DICKSON, WILLIAM K., Advocate, 8 Gloucester Place.—*Secretary.*

1882.*DICKSON, WILLIAM TRAQUAIR, W.S., 11 Hill Street.

1886.*DIXON, JOHN HENRY, Dundarach, Pitlochry.

1899. DOBIE, WILLIAM FRASER, 47 Grange Road.

1887. DODDS, Rev. JAMES, D.D., The Manse, Corstorphine.

1905. DOLLAR, ROBERT, 134 California Street, San Francisco, U.S.A.

1895. DONALDSON, HENRY T., British Linen Bank, Nairn.

1867.*DONALDSON, JAMES, LL.D., Principal of the University of St Andrews.

1891. DONALDSON, ROBERT, M.A., Headmaster, Lochend Road Public School, 34 Duddingston Park, Portobello.

1861.*DOUGLAS, DAVID, 10 Castle Street.

1895 DOUGLAS, Sir GEORGE, Bart., Springwood Park, Kelso.

1902. DOUGLAS, R. SMEATON, Art and Writing Master, Ayr Academy.

1885 DOUGLAS, Rev. SHOLTO D. C., Douglas Support, Coatbridge.

1881.*DOUGLAS, W. D. ROBINSON, Orchardton, Castle-Douglas.

1893. DOWDEN, Right Rev. JOHN, D.D., LL.D., Bishop of the Episcopal Church in Edinburgh, 13 Learmonth Terrace.

1874. DOWELL, ALEXANDER, 13 Palmerston Place.

1895. DOWNIE, Lieut.-Col. KENNETH MACKENZIE, M.D., Pentland Cottage, Gillespie Road, Colinton.

1900 DRUMMOND, JAMES W., Westerlands, Stirling.

1896.*DRUMMOND, ROBERT, C.E., Fairfield, Paisley.

1878. DRUMMOND, WILLIAM, 4 Learmonth Terrace.

1895.*DRUMMOND-MORAY, Capt. W. H., of Abercairney, Crieff.

1867.*DUFF, Right Hon. Sir MOUNTSTEUART ELPHINSTON GRANT, G.C.S.I., 11 Chelsea Embankment, London.

1891 DUFF, THOMAS GORDON, of Drummuir, Keith.

1902 DUFF-DUNBAR, Mrs L., of Ackergill, Ackergill Tower, Caithness.

1890. DUGUID-M'COMBIE, PETER, of Easter Skene, Aberdeenshire.

1872.*DUKE, Rev. WILLIAM, D.D., St Vigeans, Arbroath.

1878. DUNBAR, Sir ARCHIBALD HAMILTON, Bart., of Northfield, Duffus House, Elgin.

1887. DUNCAN, G. S., Dunmore Villa, Blairgowrie.

1877.*DUNDAS, RALPH, C.S., 16 St Andrew Square.

1902. DUNEDIN, The Right Hon. The Lady, 7 Rothesay Terrace.

1875. DUNS, Rev. JOHN, D.D., 5 Greenhill Place.—*Curator of Museum.*

1904. DYER, EDMUND EUSTACE, M.B., C.M., Mar Place House, Alloa.

1892.*EDWARDS, JOHN, 4 Great Western Terrace, Glasgow.

1904. EELES, FRANCIS CAROLUS, 105 Adelaide Road, London.

1885.*ELDER, WILLIAM NICOL, M.D., 6 Torphichen Street.

1901 ELGIN and KINCARDINE, The Right Hon. The Earl of, K.G., Broomhall, Dunfermline.

1880. ELLIOT, JOHN, of Binks, Yarborough Villa, Elmgrove, Southsea.

1889. ERSKINE, DAVID C. E., of Linlathen, Linlathen House, Broughty Ferry.

1880.*FAULDS, A. WILSON, Knockbuckle House, Beith.

1904. FERGUSON, JAMES ARCHIBALD, Banker, Primrose Villa, Primrose Bank Road, Trinity.

1890. FERGUSON, Prof. JOHN, LL.D., University, Glasgow.

1890. FERGUSON, Rev. JOHN, B.D., Manse of Aberdalgie, Perthshire.

1892. FERGUSON, JOHN, Writer Duns.
1875. FERGUSSON, Sir JAMES R., Bart., of Spitalhaugh, West Linton.
1899.*FINDLAY, JAMES LESLIE, Architect, 10 Eton Terrace.
1892.*FINDLAY, JOHN R., 27 Drumsheugh Gardens.
1880. FINLAY, JOHN HOPE, W.S., 19 Glencairn Crescent.
1885. FLEMING, D. HAY, LL.D., 16 Greyfriars Garden, St Andrews.
1888. FLEMING, JAMES, jun., Kilmory, Skelmorlie, Ayrshire.
1895. FLEMING, JAMES STARK, Duneaton, Whittingehame Drive, Glasgow.
1893.*FLEMING, Rev. JAMES, M.A., Minister of Kettins.
1875.*FOOTE, ALEXANDER, 111 Warwick Road, Earl's Court, London.
1890. FORRESTER, HENRY, Woodheld, Colinton.
1883. FOX, CHARLES HENRY, M.D., 35 Heriot Row.
1862.*FRASER, ALEXANDER, 17 Eildon Street.
1902. FRASER, EDWARD D., 50 Moray Place
1898. FRASER, HUGH ERNEST, M.A., M.D., Medical Superintendent, Royal Infirmary, Dundee.
1886. FRASER, JAMES L., Castle Tolmie, Inverness.
1896. FULLERTON, JOHN, 1 Garthland Place, Paisley.

1890. GARDEN, FARQUHARSON T., 4 Rubislaw Terrace, Aberdeen
1891.*GARSON, WILLIAM, W.S., 69 Palmerston Place.
1891.*GARSTIN, JOHN RIBTON, D.L., M.A., Braganstown, Castlebellingham, Co. Louth, Ireland.
1898. GAYTHORPE, HARPER, Prospect Road, Barrow-in-Furness.
1886. GEBBIE, Rev. FRANCIS, 20 Lynedoch Place
1895. GIBB, ALEXANDER, 58 Ashley Terrace.
1877. GIBB, JOHN S., 8 Cobden Crescent.
1897. GIBSON, Rev. JOHN MACKENZIE, M.A., 22 Regent Terrace.
1903. GIBSON, WILLIAM, M.A., 9 Danube Street.
1896. GILLIES, PATRICK HUNTER, M.D., Ballachuan, Balvicar, Oban.
1903. GILRUTH, JAMES DAVID, M.A., M.B., C.M., Hyde Park House, Arbroath
1901. GLADSTONE, Sir JOHN R., Bart., of Fasque, Laurencekirk.
1885. GLEN, ROBERT, 32 Dublin Street
1896. GORDON, ARCHIBALD A., C.A., 1 Coates Gardens.
1901. GORDON, The Hon. J. E., M.P., 61 Prince's Gate, London.
1884. GORDON, JAMES, W.S., 8 East Castle Road, Merchiston
1889. GORDON, WILLIAM, of Tarvie, 60 South Street, St Andrews.
1883. GORDON-GILMOUR, Lt.-Col. ROBERT, C.B., D.S.O., of Craigmillar, The Inch, Liberton
1869 GOUDIE, GILBERT, 31 Great King Street
1898. GOURLIE, JAMES, Lieut. R.F.A., Aurungabad, Deccan, India
1892. GRAHAM, ROBERT C., Skipness, Argyll.
1888. GRANT, F. J., W.S., Lyon Office, H.M. General Register House.
1905. GRANT, JAMES, L.R.C.P. and S., Stromness.
1903 GRANT, JOHN MACPHERSON, yr. of Ballindalloch, Old Milton, Kingussie.
1902. GRANT, P. A. H., of Dunnamor, Rhynie, Aberdeenshire
1882. GRAY, GEORGE, Clerk of the Peace, County Buildings, Glasgow
1904. GRAY, BAXTER, Springbank, Broughty Ferry.
1904. GRAY, Rev. JOHN, 9 Whitehouse Terrace
1894. GRAY-BUCHANAN, A. W., Parkhill, Polmont.
1891. GREEN, CHARLES E., The Hollies, Gordon Terrace.

1903. GREENWOOD, WILLIAM DE R., Barrister-at-Law, Beaumaris, Spring Grove, Isleworth, Middlesex

1887 GREIG, ANDREW, C.E., 3 Duntrune Terrace, Broughty Ferry.

1886 *GREIG, T. WATSON, of Glencarse, Perthshire

1899 GREWAR, DAVID S., Dalnasnaught, Glenisla, Alyth.

1880 GRIEVE, SYMINGTON, 11 Lauder Road.

1871 *GRUB, Very Rev. Provost, St Ninian's House, Perth.

1884.*GUTHRIE, CHARLES J., Advocate, K.C., Sheriff of Ross, Cromarty, and Sutherland, 13 Royal Circus.

1904. GUTHRIE, Sir JAMES, President of the Royal Scottish Academy, 41 Moray Place

1899. GUTHRIE, JOHN, Solicitor, Town Clerk of Crail.

1874. GUTHRIE, Rev. ROGER R. LINGARD, Taybank House, Dundee.

1905. GUTHRIE, THOMAS MAULE, Solicitor, Brechin

1861 *HADDINGTON, The Right Hon. The Earl of, K.T., Tyninghame, Prestonkirk.

1904. HALDANE, R. C., of Lochend, Ollaberry, Lerwick, Shetland.

1891 HAMILTON, JAMES, Hatton, London Road, Kilmarnock.

1901 *HAMILTON OF DALZELL, The Right Hon. Lord, Dalzell, Motherwell

1898. HAMPTON, Rev. DAVID MACHARDY, The Manse, Culross.

1903 HARRIS, WALTER B., Tangier, Morocco.

1887 HARRISON, JOHN, Rockville, Napier Road

1886. HART, GEORGE, Procurator-Fiscal of Renfrewshire at Paisley.

1905. HARVEY, WILLIAM, 4 Gowrie Street, Dundee.

1882 HAY, GEORGE, *Arbroath Guide* Office, Arbroath.

1874 HAY, J. T., Blackhall Castle, Banchory

1865.*HAY, ROBERT J. A., Florence.

1895. HEITON ANDREW GRANGER, Architect Perth.

1902. HENDERSON, ADAM, M.A., Langlea, Noblehill, Dumfries

1888.*HENDERSON, Col. GEORGE, of Heverswood, Brasted, Kent.

1889.*HENDERSON, JAMES STEWART, 1 Pond Street, Hampstead, London, N.W.

1886. HENRY, DAVID, Architect, Estherville, Hepburn Gardens, St Andrews.

1901. HERRIES, The Right Hon. Lord, Everingham Park, York.

1891. HERRIES, Major WILLIAM D., yr. of Spottes Hall, Dalbeattie.

1897. HEWAT, Rev. KIRKWOOD, M.A., U.F.C. Manse, Prestwick.

1887. HEWISON, Rev. J. KING, M.A., D.D., The Manse, Rothesay.

1896. HIGGIN, J. WALTER, Benvoulin, Oban.

1881. HILL, GEORGE W., 6 Princes Terrace, Dowanhill, Glasgow.

1904. HOLDEN, Lieut.-Col ROBERT MACKENZIE, 4th Bn. The Cameronians, United Service Club, London.

1877.*HOME-DRUMMOND, Col H. S., of Blair Drummond, Stirling.

1874.*HOPE, HENRY W., of Luffness, Aberlady.

1874.*HORNIMAN, FREDERICK JOHN, Surrey Mount, Forest Hill, London.

1896. HORSBURGH, JAMES, 21 Campden Hill Gardens, Kensington, London.

1904. HORTON-SMITH, LIONEL GRAHAM, Barrister-at-Law, 53 Queen's Gardens, Lancaster Gate, London

1901 HOULDSWORTH, Sir WILLIAM HENRY, Bart., M.P., Coodham, Kilmarnock.

1892. HOUSTON, Rev. A. M'NEILL, M.A., B.D., The Manse, Auchterderran, Cardenden, Fife.

1899. HOWATT, HENRY R., Brantwood, Corrour Road, Newlands, Glasgow

1889.*HOWDEN, CHARLES R. A., Advocate, 25 Melville Street.

1886. HOWDEN, JOHN M., C.A., 11 Eton Terrace

1861.*HOWE, ALEXANDER, W.S., 17 Moray Place.

1900. HOZIER, Hon. JAMES, M.P., Mauldslie Castle, Carluke.

1872.*Hunter, Col. C. Hughes, Plas Cöch, Llanfair P.G., Anglesea

1891. Hunter, Rev. James, Fala Manse, Blackshiels.

1886. Hunter, Rev. Joseph, M.A. 125 Mayfield Road

1898. Hunter, Thomas, W.S., Town Clerk of Edinburgh, Inverarbour, 54 Inverleith Place.

1882. Hutcheson, Alexander, Architect, Herschel House, Broughty Ferry.

1895. Hutchison, James T., of Moreland, 12 Douglas Crescent.

1871.*Hutchison, John, R.S.A., 19 Manor Place.

1899. Imrie, Rev. David, St Andrew's U.F. Church, Dunfermline.

1891. Inglis, Alexander Wood, Secretary, Board of Manufactures, 30 Abercromby Place.

1904. Inglis, Francis Caird, Rock House, Calton Hill.

1887. Inglis, Rev. W. Mason, M.A., Auchterhouse.

1896. Ireland, William W., M.D., 1 Victoria Terrace, Musselburgh.

1901. Jackson, Richard C., of Bowyer Park, Camberwell, Surrey

1871.*Jamieson, James Auldjo, W.S., 14 Buckingham Terrace

1902 Johnston, Alfred Wintle, Architect, 59 Oakley Street, Chelsea, London

1892. Johnston, David, 24 Huntly Gardens, Kelvinside, Glasgow

1905. Johnston, The Hon. Lord, 33 Moray Place

1900. Johnston, William M.D., C.B., Colonel (retired), Army Medical Staff, of Newton Dee, Muntle.

1903. Johnstone, Rev. David, Minister of Quarff, Shetland.

1892. Johnstone, Henry, M.A. Oxon. (Edinburgh Academy), 69 Northumberland Street.

1898 Jonas, Alfred Charles, Uch Cae, Melfort Road, Thornton Heath, Surrey

1893. Kaye, Walter Jenkinson, B.A. Pembroke College, Harrogate

1870.*Keltie, John S., LL.D., Secretary Royal Geographical Society, 15 Neville Court, Abbey Road, London, N.W.

1859.*Kennedy, John, M.A., 25 Abingdon Street, Westminster.

1889.*Kermode, Philip M. C., Advocate Claughbane, Ramsey, Isle of Man.

1889. Kerr, Andrew William, Royal Bank House, St Andrew Square

1896. Kerr, Henry F., A.R.I.B.A., 62 Hanover Street.

1878. King, Sir James, Bart., LL.D., 115 Wellington Road, Glasgow.

1884. Kinloch, Sir John G. S., Bart., Kinloch House, Meigle

1892 Kinross, John, Architect R.S.A., Seven Gables, 33 Mortonhall Road

1900 *Kintore, The Right Hon. The Earl of, G.C.M.G., LL.D., Keith Hall Inverurie

1896. Kirkpatrick, John G., W.S., 32 Mounmgside Park, Edinburgh

1903 Laidlaw, Walter, Abbey Cottage Jedburgh.

1890 Laing, James H., W., M.A., B.Sc. M.B., C.M., 9 Tay Square Dundee.

1899. Lamb, James, Leadale, Inverary Terrace, Dundee

1901. Lamington, The Right Hon. Lord, G.C.M.G., Lamington House, Lamington

1901.*Lamont, Norman, of Knockdow, Toward, Argyleshire.

1900. Lang, Andrew, M.A. LL.D., D.C.L., 1 Marloes Road, Kensington, London.

1892.*Lang, James, 9 Crown Gardens, Dowanhill, Glasgow.
1893. Langwill, Robert B., 7 St Leonard's Bank, Perth.
1882 *Leadbetter, Thomas Greenshields, Architect, Swinton House, Coldstream.
1904. Leitch, Colin, Ardrishaig.
1884.*Lennox, James, Eden Bank, Dumfries.
1857.*Leslie, Charles Stephen, of Balquhain, 11 Chanonry, Aberdeen.
1901.*Leven and Melville, The Right Hon. The Earl of, K.T., Glenferness, Dumphail
1902.*Leveson-Gower, F. S., M.P., Berkeley House, Berkeley Square, London.
1890. Lindsay, Leonard C., 23 Belgrave Road, London.
1873.*Lindsay, Rev. Thomas M., D.D., Professor of Divinity, U.F. Church College, Glasgow.
1892. Linton, Simon, Oakwood, Selkirk.
1881.*Little, Robert, Ardenlea, Northwood, Middlesex.
1898. Livingstone, Duncan Paul, Newbank, Giffnock.
1901. Livingstone, Matthew, 32 Hermitage Gardens.
1904. Lockhart, Sir Simon Macdonald, Bart. of Lee and Carnwarth, The Lee, Lanark.
1901. Loney, J. W. M., 6 Carlton Street.
1882. Lorimer, George, Durrisdeer, Gilsland Road.
1899. Low, Rev. George Duncan, M.A., 61 Morningside Drive.
1902. Low, George M., Actuary, 11 Moray Place.
1903. Lowe, D. F., M.A., LL.D., Headmaster, George Heriot's School, Lauriston Place.
1904. Lowson, George, LL.D., Rector of the High School, 14 Park Place, Stirling
1873.*Lumsden, Lt.-Col. Henry William, Langley Park, Montrose.
1873.*Lumsden, Hugh Gordon, of Clova, Lumsden, Aberdeenshire.
1880.*Lumsden, James, Arden House, Arden, Dumbartonshire.
1905. Lusk, David Colville, Southdean, Colinton Road.
1893. Lynn, Francis, Livingstone Terrace, Galashiels.

1892. Macadam, Joseph H., 38 Shoe Lane, London.
1885. M'Bain, James M., Banker, Arbroath.
1893. MacBrayne, David, Auchintiel, Helensburgh.
1904. MacBride, MacKenzie, Pleydell House, Pleydell Court, Fleet Street, London
1904. Macdonald, Charles, Dunglass Castle, Bowling.
1885. Macdonald, Coll Reginald, M.D., Ardantiae, Ayr.
1900. Macdonald, George, M.A., LL.D., 17 North Learmonth Gardens,—*Curator of Coins.*
1899. Macdonald, James, 3 Dundas Street.
1879. Macdonald, James, W.S., 21 Thistle Street.
1890.*Macdonald, John Matheson, 95 Harley Street, London, W.
1882. Macdonald, Kenneth, Town Clerk of Inverness.
1890. Macdonald, William Raf, Neidpath, Wester Coates Avenue.
1896. Macdougall, J. Patten, Advocate, 39 Heriot Row, and Gallanach, Oban.
1872 *M'Dowall, Thomas W., M.D., East Cottingwood, Morpeth.
1860. Macewen, John Cochrane, Trafford Bank, Inverness.
1892. M'Ewen, Rev. John, Dyke, Forres.
1903. M'Ewen, W. C., M.A., W.S., 9 Douglas Crescent.
1899. Macfarlane-Grieve, W. A., M.A. and S.C.L. Oxon., M.A. Cantab., Impington Park, Cambridgeshire.
1902. M'Gilchrist, Charles R. B., 14 Westminster Road, Liscard, Cheshire.

1898. M'Gillivray, Angus, C.M., M.D., 23 Tay Street, Dundee.
1878. MacGillivray, William, W.S., 32 Charlotte Square.
1901. MacGregor, Alasdair R., Edinchip, Lochearnhead.
1889. M'Hardy, Lt.-Col. A. B., C.B., 3 Ravelston Park.—*Vice-President.*
1898. MacIntosh, Rev. Charles Douglas, M.A., Minister of St Oran's Church, Connel, Argyllshire.
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1890. Mackay, James, Seend Manor, Melksham, Wilts.
1888. Mackay, J. F., W.S., Whitehouse, Cramond Bridge, Midlothian.
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1892. Mackay, Thomas A., 22 Clarence Street.
1882. Mackay, William, Solicitor, Inverness.
1899. Mackenzie, Sir Alexander Muir, Bart., of Delvine, Murthly.
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1891.*Mackenzie, James, 2 Rillbank Crescent.
1872.*Mackenzie, Rev. James B., Kenmore, Aberfeldy.
1900. Mackenzie, Sir Kenneth J., Bart., King's and Lord Treasurer's Remembrancer, 10 Moray Place.
1882. Mackenzie, R. W. R., Stormontfield, Perth.
1870.*Mackenzie, Thomas, Sheriff-Substitute, Tain.
1904. Mackenzie, William Cook, Lutha, Selborne Road, Sidcup, Kent.
1904 Mackenzie, W. M., M.A., 7 Dryburgh Gardens, Glasgow.
1876. M'Kie, Thomas, Advocate, 30 Moray Place.
1901. M'Killop, James, jun., Polmont Park, Polmont.
1888.*Mackinlay, J. M., M.A., The Lee, 18 Colinton Road, Merchiston.
1893. Mackintosh, William Fyfe, Solicitor, Maulesbank House, Arbroath.
1865.*Mackison, William, Architect, 8 Constitution Terrace, Dundee.
1878. Maclagan, Robert Craig, M.D., 5 Coates Crescent.
1903. M'Lauchlan, James J., F.F.A., 19 Coates Gardens.
1896. MacLean, J. A., Union Bank House, Fortar.
1903. M'Lean, Rev. John, Minister of Grantully, Pitlie, Aberfeldy.
1885.*MacLehose, James J., M.A., 61 St Vincent Street, Glasgow.
1893. Macleod, John N., of Kintarbert, Glensadell, Argyllshire.
1890.*Macleod, Sir Reginald, K.C.B., Under-Secretary for Scotland, 50 Draycott Place, London, S.W.
1889 MacLuckie, John Reddoch, Braeside, Falkirk.
1875. Macmath, William, 16 St Andrew Square
1905. Macmillan, H. P., Advocate, 12 Nelson Street.
1882. Macphail, Rev. J. C., D.D., Harlaw Hill House, Prestonpans.
1886. Macpherson, Archibald, Architect, 7 Young Street.
1895. Macpherson, Capt. James F., United Service Club, Shandwick Place.
1878. Macpherson, Norman, LL.D., 6 Buckingham Terrace.
1882.*Macritchie, David, C.A., 4 Archibald Place.
1896. Malloch, James, M.A., Dudhope Villa, Dundee.
1899. Mann, John, C.A., Hillside, Bridge of Weir
1901. Mann, Ludovic M'Lellan, Garth, Bridge of Weir.
1901.*Mansfield, The Right Hon. The Earl of, Scone Palace, Perth.
1885. Marshall, William Hunter, of Callander, Perthshire.

1891. MARTIN, FRANCIS, 207 Bath Street, Glasgow.

1902. MARTIN, F. J., W.S., 17 Rothesay Place.

1861.†MARWICK, Sir JAMES DAVID, LL.D., 19 Woodside Terrace, Glasgow.

1886. MASSON, DAVID, LL.D., Historiographer for Scotland, 2 Lockharton Gardens.

1892. MATHESON, AUGUSTUS A., M.D., 41 George Square.

1884. MAXWELL, Right Hon. Sir HERBERT EUSTACE, Bart., LL.D., M.P., of Monreith, Wigtownshire, — *President*.

1892.†MAXWELL, Sir JOHN STIRLING, Bart., M.P., of Pollok, Pollok House, Pollokshaws.

1887.*MAXWELL, WILLIAM, of Donavourd, Pitlochry.

1904. MAY, THOMAS, F.E.I.S., Lonmay, Lower Walton, Warrington.

1887. MEIDRUM, Rev. A., M.A., Logierait, Ballinluig.

1901. MENMUIR, CHARLES, M.A., Rutherford College, Newcastle-on-Tyne.

1900. MENZIES, W. D. G., of Pitcur, Hallyburton House, Coupar Angus.

1878. MERCER, Major WILLIAM LINDSAY, of Huntingtower, Perth.

1885. METCALFE, Rev. W. M., D.D., South Manse, Paisley.

1882. MILLAR, ALEXANDER H., Rosslynn House, Clepington Road, Dundee.

1876. MILLAR, WILLIAM WHITE, S.S.C., Dunesk, Lasswade (16 Regent Terrace).

1896. MILLER, ALEXANDER C., M.D., Craig Linnhe, Fort-William.

1898. MILLER, Rev. EDWARD, M.A., The Manse, Bishopton, Renfrewshire.

1878.*MILLER, GEORGE ANDERSON, W.S., Knowehead, Perth.

1904. MILLER, JOHN CHARLES, Agent, Commercial Bank, 135 West George Street, Glasgow.

1890. MILNE, Rev. ANDREW JAMIESON, LL.D., Fyvie, Aberdeenshire.

1867.*MITCHELL, Sir ARTHUR, K.C.B., M.D., LL.D., 34 Drummond Place.

1888. MITCHELL, CHARLES, C.E., 132 Princes Street.

1884. MITCHELL, HUGH, Solicitor, Pitlochry.

1903. MITCHELL, JAMES, 14 Knowe Terrace, Pollokshields, Glasgow.

1886.†MITCHELL, RICHARD BLUNT, of Polmood, 45 Albany Street.

1890.*MITCHELL, SYDNEY, Architect, 34 Drummond Place.

1882.†MITCHELL-THOMSON, Sir MITCHELL, Bart., 6 Charlotte Square.

1890. MONCRIEFF, Col. Sir ALEXANDER, K.C.B., Bandirran, Perth.

1903. MORAY, ANNA, Countess of, Beechwood, Mutrayfield.

1882. MORRIS, JAMES ARCHIBALD, Architect, Wellington Chambers, Ayr.

1882. MORRISON, HEW, LL.D., Librarian, Edinburgh Public Library.

1887.†MOUBRAY, JOHN J., Naemoor, Rumbling Bridge.

1904. MOUNSEY, J. L., W.S., Professor of Conveyancing University of Edinburgh, 24 Glencairn Crescent.

1897. MOXON, CHARLES, 77 George Street.

1889. MUIRHEAD, GEORGE, F.R.S.E., Commissioner for the Duke of Richmond and Gordon, Speybank, Fochabers.

1891. MUNRO, ALEXANDER M., Accountant, Town House, Aberdeen.

1899. MUNRO-FERGUSON, RONALD CRAUFURD, of Novar, M.P., Raith, Kirkcaldy.

1897. MUNRO, JOHN, J.P., Dun Righ, Oban.

1879.*MUNRO, ROBERT, M.A., M.D., LL.D., 48 Manor Place.

1890. MUNRO, Rev. W. M., Edgecliffe East, St Andrews.

1885. MURDOCH, Rev. Canon A. D., All Saints' Parsonage, 26 Brougham St.

1878.*MURRAY, DAVID, M.A., LL.D., 169 West George Street, Glasgow.

1899. MURRAY, JOHN LAMB, of Heavyside, Biggar.

1887. MURRAY, Sir JOHN, K.C.B., LL.D., D.C.L., Challenger Lodge, Wardie.
1884. MURRAY, PATRICK, W.S., 7 Eton Terrace.
1905. MURRAY, P. KEITH, W.S., 12 Lennox Street.

1905.*NAISMITH, WILLIAM, W.S., C.A., Elnock View, Hamilton.
1896. NAPIER, THEODORE, 7 West Castle Road, Merchiston.
1891.*NEILSON, GEORGE, LL.D., Pitlochie, 11 Annfield Terrace, Partick Hill, Glasgow.
1905. NEISH, WILLIAM, of The Laws, Kingennie, Dundee.
1905. NEWLANDS, GUSTAV A. V., 27 Great King Street.
1887. NEWTON, R. N. H., 3 Eglinton Crescent.
1889. NICHOLSON, J. SHIELD, M.A., D.Sc., Professor of Political Economy, &c., 3 Belford Park.
1895. NISBETT, HAMILTON MORE, The Drum, Greenend, Mid-Lothian.
1877.*NIVEN, ALEXANDER T., C.A., 28 Fountainhall Road.
1895. NIXON, WILLIAM, Solicitor, 10 Whitehall Street, Dundee.
1891. NOBLE, ROBERT, Heronhill, Hawick.
1898. NOTMAN, JOHN, F.F.A., 176 Newhaven Road,—*Treasurer*.

1890. OGILVY, HENRY J. NISBET-HAMILTON, Biel, Prestonkirk.
1904. OLDRIEVE, W. T., Principal Architect for Scotland, H.M. Office of Works, 11 Merchiston Gardens.
1899.*ORR, ROBERT, of Kinnaird, 79 West Nile Street, Glasgow.
1896. ORMOND, Rev. DAVID D., Minister of Craig's U.F. Church, Stirling.
1901. OWER, CHARLES, Architect, Benora, Broughty Ferry.
1904. PANTER, Rev. CHARLES RICHARD, M.A., LL.D., Wickhampton Rectory, Acle, Norfolk.
1903. PARK, ALEXANDER, Ingleside, Lenzie.
1898. PATON, ROBERT, City Chamberlain, 19 Regent Terrace.
1891. PATON, VICTOR ALBERT NOEL, W.S., 31 Melville Street.
1880. PATTERSON, JAMES K., Ph.D., LL.D., President of the State College of Kentucky, Lexington, U.S.A.
1871.*PAUL, GEORGE M., W.S., 16 St Andrew Square.
1879. PAUL, Sir J. BALFOUR, Advocate, Lyon King-of-Arms, 30 Heriot Row.
1882. PAUL, Rev. ROBERT, The West Manse, Dollar.
1902.*PAULIN, DAVID, F.F.A., 6 Forres Street.
1874.*PAXTON, WILLIAM, 62 Fountainhall Road.
1891. PEACE, THOMAS SMITH, Architect, King Street, Kirkwall.
1904. PEDDIE, ALEXANDER L. DICK, W.S., 7 Randolph Cliff.
1879. PEDDIE, J. M. DICK, Architect, 8 Albyn Place.
1904. PENTIN, Rev. HERBERT, M.A., Milton Abbey, Dorset.
1900. PHILLIPS, W. RICHARD, Architect, Westbourne Lodge, Goldhawk Road, Ravenscourt Park, London.
1892. PILLANS, HUGH HANDYSIDE, Royal Bank, Hunter Square.
1885.*PIRRIE, ROBERT, 9 Buckingham Terrace, Hillhead, Glasgow.
1905. PORTEOUS, WILLIAM SHERER, 3 Priesthield Road.
1901.*PORTLAND, His Grace The Duke of, K.G., Welbeck Abbey, Notts.
1905. PRICE, C. REES, 163 Bath Street, Glasgow.
1881. PRICHARD, Rev. HUGH, M.A., Dinam, Gaerwen, Anglesea.
1900. PRIMROSE, Rev. JAMES, M.A., 27 Onslow Drive, Glasgow.

1865.*Rainy, Rev. Robert, D.D., Principal and Professor of Theology and Church History, U.F.C. College, Edinburgh, 8 Rosebery Crescent.

1873.*Rampini, Charles, LL.D., Burnside, Torquay Road, Paignton, S. Devon.

1891. Ramsay, William, of Bowland, Stow.

1903. Rankin, Hugh F., Principal of the Anglo-Chinese College, Amoy, Hillview College, Alyth.

1879. Rankine, John, K.C., M.A., LL.D., Professor of Scots Law, University of Edinburgh, 23 Ainslie Place.

1899. Rea, Alexander, M.R.A.S., Superintendent of the Archæological Survey of South India, Bangalore.

1901. Reid, Alan, F.E.I.S., The Loaning, Merchiston Bank Gardens.

1888.*Reid, Sir George, R.S.A., LL.D., 22 Royal Terrace.

1898. Reid, James Robert, 11 Magdala Crescent.

1897. Reid, Rev. Edward T. S., M.A., The Rectory, Hawick.

1905. Reid, William, 2 Bellefield Avenue, Magdalen Green, Dundee.

1891. Rhind, W. Birnie, R.S.A., Sculptor, St Helen's, Cambridge Street.

1880. Richardson, Adam B., 32 Palace Mansions, Kensington, London W.

1896. Richardson, Ralph, W.S., 10 Magdala Place.

1905. Ridgway, Montagu Leighton, Architect, St John's House, Dewsbury.

1886.*Ritchie, Charles, S.S.C., 20 Hill Street.

1902. Ritchie, G. Deans, Chapelgill, Broughton, Peeblesshire.

1902. Rivett-Carnac, Col. J. H., Château de Rougemont, Switzerland.

1898. Roberts, Alexander F., Thornfield, Selkirk.

1901.*Roberts, Thomas J. S., of Drygrange, Melrose.

1879. Robertson, George, Keeper of the Abbey, Dunfermline.

1903. Robertson, Rev. John M., D.D., Minister of St Ninians, Stirling.

1886.*Robertson, Robert, Huntly House, Dollar.

1889. Robertson, Thomas S., Architect, Balmyle, Broughty Ferry.

1879.*Robertson, W. W., Architect, Wardie Bank, Boswell Road.

1865.*Robinson, John Ryley, LL.D., The Cedars, Moorlands Road, Dewsbury.

1880.*Robson, William, S.S.C., Marchholm, Gillsland Road.

1871.*Rollo, The Right Hon. Lord, Duncrub House, Dunning.

1872.*Rosebery, The Right Hon. The Earl of, K.G., K.T., LL.D., Dalmeny Park.

1876. Ross, Alexander, LL.D., Architect, Queensgate Chambers, Inverness.

1881. Ross, Joseph Carne, M.D., 19 Palatine Road, Withington, Manchester.

1891. Ross, Thomas, Architect, 14 Saxe-Coburg Place.

1903.*Sayce, A. H., M.A., LL.D., D.D., Professor of Assyriology, Oxford, 8 Chalmers Crescent, Edinburgh.—*Foreign Secretary.*

1901. Scott, J. H. F. Kinnaird, of Gala, Gala House, Galashiels.

1892. Scott, James, J.P., Rock Knowe, Tayport.

1904. Scott, Rev. James Hay, The North Manse, Sanquhar.

1903. Scott, John, W.S., 13 Hill Street.

1900. Scott, Rev. Robert, M.A., Minister of Craig, Montrose.

1898. Scott-Hall, Rev. W. E., Oriel College, Oxford, and Plâs Llantaelog, Anglesea.

1893. Scott-Moncrieff, Sir Colin, 11 Cheyne Walk, Chelsea, London.

1893. Scott-Moncrieff, David, W.S., 24 George Square.

1889. Scott-Moncrieff, W. G., Sheriff-Substitute, Edgemoor, Lanark.

1848.*Seton, George, M.A., Advocate, Ayton House, Abernethy, Perthshire.

1892. SHIELLS, HENRY K., C.A., 141 George Street.
1897 SHIELLS, ROBERT, Banker, Neenah, Wisconsin, U.S.A.
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1892 SMITH, G GREGORY, Professor of English Literature, Queen's College, Belfast.
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1902. SMITH, WILLIAM B., 34 Buchanan Street, Glasgow.
1902. SMITH, W. C., M.A., LL.B., K.C., 6 Darnaway Street.
1892.*SMYTHE, Colonel DAVID M., Methven Castle, Perth.
1892. SOMERVILLE, Rev. J. E., B.D., Villa Jeanne, Mentone, France.
1890.*SPENCE, CHARLES JAMES, South Preston Lodge, North Shields.
1882. SPRAGUE, THOMAS B., M.A., LL.D., 29 Buckingham Terrace.
1903. STARK, Rev. WILLIAM A., Minister of Kirkpatrick-Durham, Dalbeattie.
1875. STARKE, JAMES G.H., M.A., Advocate, Troqueer Holm, Dumfries.
1891. STEELE, WILLIAM, Inland Revenue Office, Kelso.
1904. STEEL, Rev. JAMES, D.D., Vicar of Howorth, Newcastle-on-Tyne.
1901. STEUART, A. FRANCIS, Advocate, 79 Great King Street
1902 STEUART, JAMES, W.S., 10 Rothesay Terrace.
1895. STEVENSON, JOHN HORNE, M.A., Advocate, 9 Oxford Terrace.
1867.*STEVENSON, JOHN J., Architect, 4 Porchester Gardens, London, W.
1904 STEVENSON, Major-General T. R., C.B., of Sunnyside, Lanark.
1887. STEVENSON, Rev. W., M.A., The Manse, Achtertool, Kirkcaldy.
1879 STEWART, CHARLES POYNTZ, Chesfield Park Stevenage.
1901 STEWART, Sir MARK J. M'TAGGART, Bart., M.P., Ardwell, Stranraer.
1901 STEWART, Sir HUGH SHAW, Bart., M.P., Ardgowan, Greenock
1871.*STEWART, Maj.-Gen. J. H. M. SHAW, R.E., 7 Inverness Terrace, London, W.
1885. STEWART, ROBERT KING, Murdostoun Castle, Newmains, Lanarkshire.
1894. STEWART, WALTER, 3 Queensferry Gardens
1903. STIRLING-COOKSON, C. L., of Renton House, Berwickshire.
1882. STORY, Rev. R. HERBERT, D.D., LL.D., Principal of the University, Glasgow.
1897. STRACHAN, Rev. JAMES M., B.D., Kilspindie Manse, Errol.
1903.*STRATHCONA AND MOUNT ROYAL, The Right Hon. Lord, G.C.M.G., Invergoe, Argyleshire.
1889. STRATHERN, ROBERT, W.S., 13 Eglinton Crescent.
1894.*STUART, ALEX., 5 Chesham Street, London, S.W.
1904. STUART, Rev. JOHN, B.D., Kirkton, Hawick.

1895. STUART-GRAY. The Hon. MORTON GRAY, Gray House, Dundee.
1897. SULLEY, PHILIP, Bellbrae, Cupar-Fife.
1901. SUTHERLAND, His Grace The Duke of, K.G., Dunrobin Castle, Golspie.
1899.*SUTHERLAND, ROBERT M., Solsgirth, Dollar.
1887. SUTHERLAND, J. B., S.S.C., 10 Royal Terrace.
1897. SUTTIE, GEORGE C., of Lalathan, Lalathan Lodge, St Cyrus, by Montrose.
1884. SWALLOW, Rev. H. J., M.A., Hawthorne Rectory, Sunderland.
1900. SWINTON, Capt. GEORGE S. C., 36 Pont Street, London.
1899. SYLVESTER, Rev. WALTER, Montfort, Clacton-on-Sea.

1903. TAIT, JOHN HUNTER, Advocate, 43 Moray Place.
1904. TAYLOR, JAMES B., Sherfield Manor, Basingstoke, Herts.
1892.*TAYLOR, J. PRINGLE, W.S., 19 Young Street.
1900. TAYLOR, W. LAWRENCE, Broad Street, Peterhead.
1901. TAYLOR, Rev. WILLIAM, M.A., Minister of Melville Parish, Montrose.
1884. TEMPLE, Rev. WILLIAM, M.A., D.D., 7 Albert Terrace, Aberdeen.
1870.*TENNANT, Sir CHARLES, Bart., The Glen, Innerleithen.
1896. THIN, JAMES, 22 Lauder Road.
1902. THIN, ROBERT, M.A., M.B., C.M., 38 Albany Street.
1905. THIRKELL, ROBERT A. C., Roope Street, New Town, Tasmania.
1900. THOMSON, ANDREW, Glendinning Terrace, Galashiels.
1894. THOMSON, EDWARD DOUGLAS, Chief Clerk, General Post Office, 7 Walker Street.
1896. THOMSON, J. MAITLAND, LL.D., Advocate, Curator of the Historical Department H.M. General Register House, 3 Grosvenor Gardens,—*Foreign Secretary.*
1898. THORBURN, MICHAEL GRIEVE, of Glenormiston, Innerleithen
1898. TOUGH, WILLIAM, M.A., Bellevue, Barnton Gardens, Davidson's Mains.
1877. TUKE, Sir JOHN BATTY, M.D., LL.D., M.P., 20 Charlotte Square
1899. TULLOCH, Major-Gen. Sir ALEXANDER BRUCE, K.C.B., C.M.G., Llanwyrk, Crickhowell, S. Wales.
1887.*TURNBULL, WILLIAM J., 16 Grange Terrace.
1901. TURNBULL, W. S., Aikenshaw, Roseneath
1880. TURNER, FREDERICK J., Mansfield Woodhouse, Mansfield, Notts.
1865.*TURNER, Sir WILLIAM, K.C.B., M.B., LL.D., D.C.L., Principal of the University of Edinburgh, 6 Eton Terrace.
1881. TWEEDDALE, The Most Honourable The Marquess of, K.T., Yester House, Haddington.
1901.*TWEEDMOUTH, The Right Hon. Lord, Hutton Castle, Berwick-on-Tweed.

1878.*URQUHART, JAMES, H.M. Register House.
1882.*USHER, Rev. W. NEVILLE, Wellingore Vicarage, Lincoln.

1895. VALLANCE, DAVID J., Curator, Royal Scottish Museum, Chambers Street.
1862.*VEITCH, GEORGE SETON, Friarshall, Paisley.

1904. WADDELL, JAMES ALEXANDER, of Leadloch, 12 Kew Terrace, Glasgow.
1884. WALKER, R. C., S.S.C., Wingate Place Newport, Fife
1879. WALLACE, THOMAS, Rector of High School, Inverness.
1876. WATERSTON, GEORGE, 10 Claremont Crescent.
1904. WATLING, H. STEWARD, Architect, Kingsway House, Dovercourt, Essex

1891 *WATSON, Rev. ALEXANDER DUFF, B.D., U.F.C. Manse, Bourtreebush, Stonehaven.

1904. WATSON, JOHN, Architect, 25 Frederick Street.

1895. *WATSON, ROBERT F., Briery Yards, Hawick.

1904. WATSON, WALTER CRUM, B.A. Oxon., 50 Queen Street

1893. WATSON, WILLIAM, Dep.-Surgeon-General, The Lea, Corstorphine.

1887. WATT, JAMES CRABB, K.C., 46 Heriot Row.

1879 WEDDERBURN, J. R. M., M.A., W.S., 3 Glencairn Crescent.

1904. WEDGWOOD, JAMES INGALL, 36 Lord Mayor's Walk, York.

1877. WELSH, JOHN, Moredun, Liberton.

1872. *WEMYSS AND MARCH, The Right Hon. The Earl of, LL.D., Gosford, Longniddry.

1884. WHITE, CECIL, 23 Drummond Place.

1904. WHITE, JAMES, St Winnin's, Bearsden, Dumbartonshire.

1869 *WHITE, Col. THOMAS PILKINGTON, R.E., 3 Hesketh Crescent, Torquay.

1903. WHITELAW, ALEXANDER, of Gartshore, Kirkintilloch.

1902 WHITELAW, CHARLES EDWARD, Architect, 168 Bath Street, Glasgow.

1885. WHITELAW, DAVID, 33 Northumberland Street.

1894. WILLIAMS, FREDERICK BESSANT, 3 Essex Grove, Upper Norwood, London, S.E.

1895. WILLIAMS, Rev. GEORGE, Minister of Norrieston U.F. Church, Thornhill, Stirling

1897. WILLIAMS, HARRY M., Tilehurst, Priory Park, Kew, Surrey.

1884. WILLIAMSON, Rev. ALEXANDER, D.D., 39 Lauder Road.

1305. WILSON, JOHN PENNY, 11 Drummond Place.

1888. WILSON, Rev. Canon W. HAY, The Parsonage, Dingwall.

1892. *WORDIE, JOHN, 42 Montgomery Drive, Glasgow.

1903. WRIGHT, Rev. FREDERICK G., Chaplain to the Forces, Royal Victoria Hospital, Netley.

1889 YOUNG, HUGH W., of Burghead, Friars House, Elgin.

1905. YOUNG, ROBERT, 39 Leamington Terrace.

1891 YOUNG, WILLIAM LAURENCE, Belvidere, Auchterarder.

LIST OF THE CORRESPONDING MEMBERS

OF THE

SOCIETY OF ANTIQUARIES OF SCOTLAND.

(*Elected since* 1851.)

1874.*Anderson, John, M.D., Curator of the Imperial Museum, Calcutta.
1866. Anderson, Joseph, Wick.
1876. Arnold, Thomas, Architect, London
1865.*Barnwell, Rev. Edward L., Ruthin, Wales.
1865. Bell, Allan, of Abbot's Haugh.
1853.†Bruce, Rev. John Collingwood, M.A.
1900. Buchanan, Mungo, Falkirk.
1873.†Bugge, Sophus, Prof. of Icelandic, Royal University of Christiania.
1870. Carmichael, Alexander A., Lochmaddy, South Uist.
1875. Cleuziou, M. Henri du, Commissioner for Public Monuments, Paris.
1892. Coles, Frederick R., Tongland, Kirkcudbright.
1868. Cooke, Edward William, R.A., London.
1857. Curry, Eugene, M.R.I.A., Dublin.
1874. Dalgarno, James, Slains, Aberdeenshire.
1888. Delorme, M. Emmanuel, Secretary of the Chamber of Commerce, Toulouse.
1864.*Dickson, Robert, L.R.C.S.E., Carnoustie.
1901. Eeles, F. C., Munross, Stonehaven.
1851. Fenwick, John, Newcastle
1878. Findlay, Col. the Hon. J. B., LL.D., D.C.L., Kittanning, Pennsylvania.
1892. Flavy, C. Barrière, Avocat, Toulouse.
1851. French, Gilbert J., Bolton.
1877. Galloway, William, Architect.
1864. Gauchard, M. Louis Prosper, Keeper of the Belgian Archives.
1873. Geekie, A. C., D.D., Bathurst, New South Wales.
1864. Gergerès, M. J. B., Keeper of the Library, Bordeaux.
1875. Gillespie, Rev James E., Kirkgunzeon
1865.†Grlenwell, Rev. Canon W., Durham.
1866. Grierson, Thomas B., Surgeon, Thornhill, Dumfriesshire.
1864. Hagemans, Gustave, Brussels.
1889. Hairby, Captain Edward, F.R.C.S.
1876 *Hay, George, Arbroath.
1867. Herbst, Archivary, Copenhagen.
1865.*Irvine, James T., Architect.
1855. Jervise, Andrew, Brechin.
1860. Keller, Dr Ferdinand, Zurich.
1859 Klemming, G. R., Stockholm.
1877. Laing, Henry, Seal Engraver.
1889. Landsborough, Rev. David, LL.D., Minister of Henderson U.F. Church, Kilmarnock.

* Those marked with an asterisk subsequently became Fellows
† These were subsequently made Honorary Members.

1859. LAPPENBERG, Dr J. M., Hamburg
1877. LAURENSON, ARTHUR, Lerwick.
1867. LAWSON, Rev. ALEXANDER, Creich, Fifeshire
1861. LE MEN, M., Archiviste du Département, Quimper, Finistère.
1864. LORIMER, Prof. PETER, D.D., London.
1877. LYON, D. MURRAY, Ayr.
1904. MACKIE, ALEXANDER, Abernethy.
1890.*M'LEAN, Rev. JOHN, Grandtully, Aberfeldy.
1897. MACNAUGHTON, Dr ALLAN, Taynuilt.
1879. MAILLARD, M. L'Abbé, Thorigne, Mayenne, France.
1867. MAPLETON, Rev. R. J., M.A., Kilmartin, Argyleshire
1876. MATHEWSON, ALLAN, Dundee.
1872. MICHIE, Rev. J. G., A.M., Migvie, Aberdeenshire.
1865. MILLER, DAVID, Arbroath.
1861 *MITCHELL, ARTHUR, M.D., Deputy-Commissioner in Lunacy.
1871. MORRISON, Rev. JAMES, Urquhart, Elginshire.
1885. MORSING, CARLOS ALBERTO, C.E., Rio de Janeiro.
1863. NICHOLS, JOHN GOUGH, London.
1865. NICHOLSON, JAMES, Kirkcudbright.
1903. RITCHIE, JAMES, The Schoolhouse, Port Elphinstone, Inverurie.
1871. RUSSELL, Rev. JAMES, Walls, Shetland.
1873.†RYGH, OLAF, Prof. of Icelandic, Royal University of Christiania.
1873. SAVE, Dr CARL, Prof. of Icelandic in the University of Upsala.
1852. SCOTT, ALLAN N., Lieut., Madras Artillery.
1872. SHEARER, ROBERT INNES, Thrumster, Caithness.
1853. SMILES, JOHN FINCH, M.D.
1892. SUTHERLAND, Dr A., Invergordon.
1860. TAIT, GEORGE, Alnwick.
1885. TEMPLE, CHARLES S., Cloister Seat, Udny, Aberdeenshire.
1874. THOMSON, ROBERT, Shuna, Easdale, Argyll.
1868.*TRAILL, WILLIAM, M.D., St Andrews.
1863. TROYON, M. FREDÉRIC, Lausanne.
1857. WALKER, Rev HENRY, Urquhart, Elgin.
1888. WATT, W. G. T., of Breckness, Orkney.
1864. WAITS, THOMAS, British Museum, London.
1865. WEALE, W. H. JAMES, of Bruges.
1857. WILDE, W. R., Royal Irish Academy, Dublin.
1872. WILSON, Rev. GEORGE, F.C. Manse Glenluce, Wigtownshire.
1888. WRIGHT, Rev. ALBAN H., Prof., Codrington College, Barbadoes.

LIST OF HONORARY MEMBERS

OF THE

SOCIETY OF ANTIQUARIES OF SCOTLAND,

NOVEMBER 30, 1905.

[*According to the Laws, the number is limited to* TWENTY-FIVE.]

1874.

The Right Hon. Lord AVEBURY, LL.D., D.C.L., High Elms, Farnborough, Kent.

Sir JOHN EVANS, K.C.B., D.C.L., LL.D., &c., Nashmills, Hemel-Hempstead.

1879.

Rev. Canon WILLIAM GREENWELL, M.A., D.C.L., Durham.

1885.

Dr HANS HILDEBRAND, Royal Antiquary of Sweden.

Dr ERNEST CHANTRE, The Museum, Lyons.

1892.

WHITLEY STOKES, LL.D., C.S.I., 15 Grenville Place, Cornwall Gardens, London.

1892.

Professor LUIGI PIGORINI, Director of the Royal Archæological Museum, Rome.

Dr HENRY C. LEA, 2000 Walnut Street, Philadelphia.

1897.

W. M. FLINDERS PETRIE, D.C.L., LL.D., Edwards Professor of Egyptology in University College, London.

JOHN RHYS, M.A., LL.D., Professor of Celtic, and Principal of Jesus College, Oxford.

Sir FRANCIS TRESS BARRY, Bart., M.P., St Leonard's Hill, Windsor, and Keiss Castle, Keiss, Caithness.

Dr SOPHUS MULLER, Secretary of the Royal Society of Northern Antiquaries, and Director of the National Museum, Copenhagen.

Dr OSCAR MONTELIUS, Professor at the National Museum, Stockholm.

1900.

EMILE CARTAILHAC, 5 Rue de la Chaine, Toulouse.

F. HAVERFIELD, M.A., LL.D., Christ Church, Oxford.

J. ROMILLY ALLEN, 28 Great Ormond Street, London.

Rev. S. BARING GOULD, Lew Trenchard, North Devon

ROBERT BURNARD, Huccaby House, Princetown, S. Devon.

CHARLES W. DYMOND, The Castle, Sawrey S.O., Lancashire.

LIST OF THE LADY ASSOCIATES

OF THE

SOCIETY OF ANTIQUARIES OF SCOTLAND.

NOVEMBER 30, 1905.

[*According to the Laws, the number is limited to* TWENTY-FIVE.]

1873.

The Baroness BURDETT COUTTS.

1874.

The Dowager Lady DUNBAR of Northfield, Duffus House, Elgin.

1888.

The Right Hon. The COUNTESS OF SELKIRK

1890.

Mrs P. H. CHALMERS of Avochie.

1894.

5 Miss EMMA SWANN, Walton Manor, Oxford.

1895.

Miss H. J. M. RUSSELL of Ashiesteel, Galashiels.
Miss AMY FRANCES YULE of Tarradale, Ross-shire.

1900.

Miss M. A. MURRAY, Edwards Library, University College, London.
9 Mrs E. S. ARMITAGE, Westholm, Rawdon, Leeds.

LIST OF SOCIETIES, INSTITUTIONS, &c., EXCHANGING PUBLICATIONS.

The Society of Antiquaries of London.
The Royal Society of Antiquaries of Ireland.
The Cambrian Archæological Association.
The Royal Archæological Institute of Great Britain and Ireland.
The British Archæological Association.
The Society of Architects, London.
The Architectural, Archæological, and Historic Society of Chester.
The Derbyshire Archæological and Natural History Association.
The Essex Archæological Society.
The Kent Archæological Society.
The Historic Society of Lancashire and Cheshire, Liverpool.
The Chester Archæological and Historic Society, Chester.
The Architectural Society of the Counties of Lincoln and Nottingham and Associated Societies.
The Society of Antiquaries of Newcastle-upon-Tyne.
The Somersetshire Archæological and Natural History Society.
The Surrey Archæological Society.
The Sussex Archæological Society.
The Geological Society of Edinburgh.
The Berwickshire Naturalists' Club.
The Anthropological Institute, London.
The Wiltshire Archæological Society.
The Royal Irish Academy.
The Bristol and Gloucestershire Archæological Society.
The Numismatic Society, London.
The Shropshire Archæological Society.

The Dumfriesshire Natural History and Antiquarian Society.
The Edinburgh Architectural Association.
The New Spalding Club, Aberdeen.
The Cambridge Antiquarian Society.
The Royal Historical Society, London.
The Society of Architects, London.
The Literary and Scientific Society, The Museum, Elgin.
The Yorkshire Archæological Society, Leeds.
The Perthshire Natural History Society, Perth.
The Thoresby Society, Leeds.
The Buchan Field Club, Peterhead.
The Viking Club, London.
The Glasgow Archæological Society.

FOREIGN SOCIETIES, &c.

The Royal Society of Northern Antiquaries, Copenhagen.
La Société Nationale des Antiquaires de France, Paris.
Antiquarische Gesellschaft, Zurich.
Verein von Alterthumsfreunde im Rheinlande, Bonn.
The Smithsonian Institution, Washington, U.S.A.
The Canadian Institute, Toronto.
The Museum, Bergen.
Foreningen til Norske Fortidsmindesmerkers Bevaring, Christiania.
The Royal Academy of History and Antiquities, Stockholm.
The Bureau of Ethnology, Washington.
The Peabody Museum, Cambridge, Mass., U.S.A.
Gesellschaft fur Nutzliche Forschungen, Trier.
Physic-Œkonomische Gesellschaft, Konigsberg.
Berliner Gesellschaft fur Anthropologie, Berlin.
Anthropologische Gesellschaft, Wien.
Department of Mines, Sydney.
Société d'Archéologie de Bruxelles, Belgium.
Société des Bollandists, Bruxelles.
L'Ecole d'Anthropologie, Paris.
Société Archéologique de Namur, Namur.

Reale Accademia dei Lincei, Rome.
Der Alterthumsgesellschaft Prussia, Konigsberg.
Centralblatt fur Anthropologie, Stettin.
Société Archéologique du Midi de la France, Toulouse.
L'Académie des Inscriptions et Belles Lettres, Paris.
La Commissione Archeologica Communale di Roma.
La Société D'Anthropologie de Paris.
La Musée Guimet, Paris.
La Société Archéologique du Department de Constantine, Algeria.
National Museum of Croatia, Zagreb, Austria-Hungary.
The Bosnisch-Herzegovinisch Landes-Museum, Sarajevo, Bosnia.
Bureau des Schweizerisches Landes-Museum, Zurich.
The Geological Survey Office, Pietermaritzburg, Natal.
Nordiska Museet, Stockholm.
Museum of Northern Antiquities, The University, Christiania.
The Royal Bohemian Museum, Prague, Austria.
Societa Romana di Antropologia, Rome.
La Société d'Histoire et d'Archéologie de Gand, Belgium.
Kongelige Norske Videnskabers Selskab, Throndheim, Norway.
Historische und Antiquarische Gesellschaft in Basel, Germany.
La Société Finlandaise d'Archéologie, Helsingfors, Finland.
La Société d'Anthropologie de Lyon, France.
La Société des Antiquaires de l'Ouest, Poitiers, France.
Der Historischer Verein fur Niedersachsen, Hanover, Germany.
Goteborg och Bohuslans Fornminnesforening, Stadsbiblioteket, Goteborg.
The Archæological Survey of India, Simla.
Verein fur Nassauische Alterthumskunde, Wiesbaden, Germany.
The Provincial Museum, Toronto, Canada.

FROM THE PUBLISHERS.

The Antiquary (Elliot Stock), London.
The Reliquary and Illustrated Archæologist (Bemrose & Sons), London.
Portugalia, Oporto, Portugal.

LIBRARIES, BRITISH.

Edinburgh Public Library, George IV. Bridge.
Scottish National Portrait Gallery Library.
Glasgow University Library.
Edinburgh University Library.
Aberdeen University Library.
St Andrews University Library.
The United Free Church College Library, Edinburgh.
The Signet Library, Edinburgh.
The Advocates Library, Edinburgh.
The British Museum Library, London.
The Bodleian Library, Oxford.
The University Library, Cambridge.
Trinity College Library, Dublin.
The Royal Library, Windsor.
The Liverpool Free Library, Liverpool.
The Athenæum Club Library, London.
The Ordnance Survey Library, Southampton.
Chetham's Library, Manchester.
The Library of the Public Record Office, London.
The Library, Victoria and Albert Museum, London.

LIBRARIES, FOREIGN.

The University Library, Christiania, Norway.
The University Library, Upsala, Sweden.
The Royal Library, Stockholm, Sweden.
The University Library, Kiel, Germany.
The University Library, Leipsic, Germany.
The Royal Library, Dresden, Germany.
The Royal Library, Berlin, Prussia.
The Imperial Library, Vienna, Austria.
The National Library, Paris, France.
The Public Library, Hamburg, Germany.
The University Library, Gottingen, Germany.
The Royal Library, Munich, Bavaria.
The Royal Library, Copenhagen, Denmark.

PROCEEDINGS

OF THE

SOCIETY OF ANTIQUARIES OF SCOTLAND.

HUNDRED AND TWENTY-FIFTH SESSION, 1904–1905.

ANNIVERSARY MEETING, 30*th November* 1904.

THE RIGHT HON. SIR HERBERT MAXWELL, BART., LL.D., M.P., President, in the Chair.

Dr D. Hay Fleming and Rev. Francis Gebbie were appointed Scrutineers of the Ballot for the election of Office-Bearers and Councillors.

The Ballot having been concluded, the Scrutineers found and declared the List of the Council for the ensuing year to be as follows:—

President.

THE RIGHT HON. SIR HERBERT E. MAXWELL, BART., LL.D., M.P.

Vice-Presidents.

ROBERT MUNRO, M.A., M.D., LL.D.
Lieut.-Col. A. B. M'HARDY, C.B.
The Right Hon. LORD BALCARRES.

Councillors.

Sir ARTHUR MITCHELL, K.C.B., M.D., LL.D., } *Representing the Board of Trustees.*
The Hon. HEW HAMILTON DALRYMPLE. }
Sir KENNETH J. MACKENZIE, Bart., *Representing the Treasury.*
WILLIAM GARSON, W.S.
JOHN M. HOWDEN.
Prof. P. HUME BROWN, M.A., LL.D.
Prof. G. BALDWIN BROWN.
Right Rev. JOHN DOWDEN, D.D.
JAMES ROBERT REID.
Sir JOHN STIRLING MAXWELL, Bart.
Sir GEORGE DOUGLAS, Bart.
ALEXANDER O. CURLE, W.S.

Secretaries.

DAVID CHRISTISON, M.D. | The Hon. JOHN ABERCROMBY.

For Foreign Correspondence.

WILLIAM K. DICKSON. | Prof. A. H. SAYCE, M.A., LL.D., D.D.

Treasurer.

JOHN NOTMAN, F.F.A., 28 St Andrew Square.

Curators of the Museum.

Professor DUNS, D.D. | ALEXANDER J. S. BROOK

Curator of Coins.

GEORGE MACDONALD, M.A.

Librarian.

JAMES CURLE.

A Ballot having been taken, the following were duly elected Fellows:—

Lieut.-Col. ROBERT MACKENZIE HOLDEN, 4th Bn. The Cameronians, United Service Club, London.

GEORGE LOWSON, LL.D., Rector of the High School, 14 Park Place, Stirling.

WILLIAM COOK MACKENZIE, Lutha, Selborne Road, Sidcup, Kent.

J. L. MOUNSEY, W.S., Professor of Conveyancing, University of Edinburgh, 24 Glencairn Crescent.

W. T. OLDRIEVE, H.M. Office of Works.

ALEX. L. DICK PEDDIE, W.S., 7 Randolph Cliff.

Rev. HERBERT PENTIN, M.A., V.P. of the Dorset Nat. Hist. and Antiquarian Field Club, Milton Abbey Vicarage, Dorset.
Rev. JAS. HAY SCOTT, Minister of the U.F. Church, Sanquhar.
Capt. GEORGE F. VILLIERS, 3rd R.S. Fusiliers, County Club, Ayr.

The meeting resolved to record their sense of the loss the Society had sustained in the deaths of the following Members deceased since last Annual Meeting:—

Fellows.

	Elected
ANDREW AIKMAN, 6 Drumsheugh Gardens,	1887
JOHN T. BEER, Green Heys, Rock Ferry, Cheshire,	1872
GEORGE GODFREY CUNNINGHAM, Liberton Tower, Liberton,	1898
DAVID DEUCHAR, 12 Hope Terrace,	1882
THOMAS DICKSON, LL.D., 26 Stafford Street,	1870
WILLIAM FERGUSON, LL.D., of Kinmundy, Aberdeenshire,	1872
Major-General J. G. ROCHE FORLONG, 11 Douglas Crescent,	1889
SIR PETER ARTHUR HALKETT, Bart., of Pitfirrane, Dunfermline,	1882
JAMES HENRY LAMB, The Latch, Brechin,	1884
THOMAS GRAVES LAW, LL.D., Librarian of the Signet Library, *Foreign Secretary*,	1885
Rev. THOMAS LEISHMAN, D.D., 4 Douglas Crescent,	1871
STEWART M'GLASHAN, Sculptor, Brandon Street,	1885
Right Hon. VISCOUNT MELVILLE, Melville Castle, Midlothian,	1887
ROBERT MILLER, J.P., 38 Lauder Road,	1896
JOHN O. MITCHELL, LL.D., 7 Huntly Gardens, Glasgow,	1890
ERSKINE NICOL, R.S.A., The Dell, Feltham, Middlesex,	1861
CHARLES LINDSAY ORR-EWING, M.P., Dunskey, Portpatrick,	1901
GEORGE PETRIE, Solicitor, Castle Chambers, Dundee,	1889
Rev. WALTER J. B. RICHARDS, D.D., Montfort, Clacton-on-Sea,	1891
Rev. WILLIAM ROSS, Cowcaddens U.F. Church, Glasgow,	1867
Right Hon. LORD SHAND, 32 Bryanston Square, London,	1869
ADAM SKIRVING, of Croys, Dalbeattie,	1877
JAMES T. SMITH, of Duloch, Inverkeithing,	1877
The Right Hon. The EARL OF STAIR, K.T., LL.D., Oxenfoord Castle,	1872
The Right Hon. The EARL OF STRATHMORE, Glamis Castle,	1867
THOMAS STEEDMAN, Clydesdale Bank, Kinross,	1885
PETER STURROCK, London Road, Kilmarnock,	1882
LOCKHART THOMSON, S.S.C., 114 George Street,	1867
Rev. JOHN WILSON, M.A., D.D., Methven,	1898

Dr Christison, Secretary, read the following Report on the progress and work of the Society during the past year :—

The Roll of Membership.—In the report on the progress of the Society two years ago it was shown that the strength of the Fellows was then 706, and that it had varied in the previous ten years from 685 to 740 : also that the annual loss from deaths, lapses, and resignations had averaged 36. Hence it is necessary to bring in that number of recruits annually if we are to keep up an average strength of about 700. Since then we have not succeeded in doing this, for although Mr Abercromby was able last year to announce a net gain in 1902–3 of 4, the losses having been 30 and the admissions 34, in 1903–4 there has been a deficiency of no less than 18, the losses having been 47, caused by 28 deaths, 14 resignations, and 3 lapses, and the admissions 29, making a net loss of 14 in two years, and reducing the number of Fellows to 692. It behoves, therefore, the members of the Society to make every effort to induce their friends to join our body.

A large proportion of our losses consist of resignations ; and whatever may be the cause, I do not think it can be due to any falling off in our activity, or in the attractiveness of our work. The Excavations, both of Roman and Native remains, undertaken by the Society during the last eight years, have been an almost new development, which could hardly fail to add to our prestige, and the Papers read to the Society do not seem to me to be less interesting than of yore.

The increasing use of Limelight Illustrations, too, has enabled many of the more important papers to be expounded with greater facility and in a more attractive form than was possible formerly, without in the least detracting from their scientific value. I think it is worth consideration, however, whether a time-limit should not be enforced in the reading of the papers. It must often have been noticed that the interest of the audience flags under the crushing load of a mass of details which ought to be reserved for publication : and, what is even worse, the other papers set down for reading are either crushed out altogether, or are

hurriedly read after the majority of the audience have taken to flight. The art of reading on paper in brief is not difficult, but unfortunately authors are apt to feel the necessity for it in regard to all papers but their own.

Publications.—The Thirty-eighth Volume of *Proceedings*, of which an advance copy is laid on the table, contains 23 papers, of which 12 deal with prehistoric subjects, 6 are in the borderland between History and Prehistory, and 5 appertain to mediæval or later times. The Session was opened with a paper by Dr Thomas H. Bryce on the Cairns of Bute, in continuation of his interesting investigation of Cairns in the South-Western Highlands and Islands. Mr Coles has also continued his investigations, under the Gunning Fellowship, of Stone Circles in the North-east of Scotland. But the most novel and important paper of the year was contributed by Mr Abercromby. In last year's report Mr Abercromby pointed out that in the Museum "there are whole classes of objects that seem to cry out for some one to take a special interest in them and assign them a definite place in time": and choosing for his subject the "Drinking Cup" or "Beaker" class of Urns, he has now led the way in this important and difficult task. It is an advantage of this kind of undertaking that it gathers together information about widely scattered materials, which thus become easily available for study, not only by the original investigators at the time, but by others in future. This valuable aid to scientific research has been amply provided in this instance by Mr Abercromby, whose paper is illustrated by photographs of no fewer than 171 "Beaker" urns; and if his ingenious classification may prove to be provisional, he at least deserves all the credit due to the first attempt to grapple with a very difficult problem

Early Christian Monuments of Scotland.—After eight years employed in collecting, arranging, and editing the vast body of materials for this handsome volume, the Society may now be congratulated on its publication, which took place in the autumn of 1903. Of the numerous services

rendered in the field of antiquarian research by Dr Joseph Anderson and Mr Romilly Allen, none rank higher than the editing of this great work, willingly undertaken by them for the very moderate remuneration that it was in the power of the Society to offer. The truly scientific and exhaustive treatment of the subject, the attention given to the minutest details, and the fidelity of the vast number of illustrations, combine to give this volume a very high place among the contributions made, at any time, to our knowledge of Scottish Archæology. An undertaking involving so great an expenditure of time and labour, including, among other difficulties, travel to, and obtaining numerous photographs from, the remotest parts of Scotland, could not fail to be expensive: and as a scientific work of the kind appeals to but a small *clientèle*, it could not possibly be made remunerative. In round numbers, the total expenditure has amounted to £2240, of which £710 was defrayed from the Rhind Lectureship Fund and the Gunning Jubilee Gift. The remaining £1530 had to be met from time to time from the ordinary funds of the Society, of which £750 has been recouped by the sales of the volume. The deficit of £780 was paid partly from the balances in our favour of our annual income, so that no very serious inroad was made upon our accumulated capital.

It is gratifying to be able to record that the volume has been well received by the public. Of the issue, limited to 400 copies, 314 have been sold, and adding 20 distributed gratis, 66 remain upon our hands—not too large a stock for a standard work, which it is scarcely possible to imagine will ever require a second edition.

Roman Excavations.—The excavation of Rough Castle, one of the forts on the Antonine Vallum, was accomplished by the Society in 1903, but as the report could not be got ready for last Session it does not appear in the forthcoming volume of the *Proceedings*, and it will be laid before you in the course of the present Session. Rough Castle proved to be a very strong earthwork; and among the more notable results of the investigation may be mentioned the fine sections of the turf ramparts

obtained both in it and the Antonine Vallum, and the unique discovery of rows of "Lilia" pits, similar to those described by Cæsar as having been used to defend his lines of circumvallation at the siege of Alesia in Gaul.

A very interesting Roman excavation was accomplished also in 1903, although not by the Society, at Barhill, another of the forts on the Vallum. Mr Alexander Park, factor on the estate of Gartshore, on which Barhill is situated, stimulated by our investigation of Castlecary, made some explorations, which proved so promising that Mr Whitelaw, the proprietor, sanctioned a complete excavation of the site, which was ably carried out under the zealous superintendence of Mr Park and Mr Mackintosh, the farmer of the ground. A full account of the results will be laid before you in the present Session; and I need say no more at present than that the relics found at Barhill exceed in number and variety those discovered in any previous excavation of Roman forts in Scotland.

The Council hope to be able to recommence our Roman work this Session by making some explorations of the Station at Newstead, near Melrose.

British Excavations.—The forthcoming volume of *Proceedings* contains accounts of several enterprises under the Fund instituted by Mr Abercromby for British excavations. Besides the Cairns in Bute examined by Dr Bryce, already noticed, remains of various kinds at Dinnet, Meikleour, Perthshire, Aberdeenshire, and in Shetland were investigated by Mr Abercromby and Dr Munro. From the same fund were defrayed the expenses connected with the excavations of Stone Circles in Aberdeenshire by Mr Coles. A larger and more recent application of the Fund was in the investigation of four forts on the estate of Poltalloch, Argyle. Three of these—Ardifour, Duntroon, and the fort on Druim an Duin—have been finished: the fourth, Dunadd, is well-nigh completed; and the whole will be described in the present Session. The results, particularly at Dunadd, believed to be the ancient

capital of Dalriada, have amply justified the devotion for the first time of a part of the Fund to this class of remains.

Museum.—Among the more important acquisitions for the National Museum were two Collections, both chiefly of stone implements, and from the North-East of Scotland. The first of these was bequeathed by the late Mr William Boyd, M.A., F.S.A. Scot. It includes 47 perfect flint arrow-heads, 21 polished stone axes, and 3 stone balls with projecting discs, also 8 lighting appliances, a miscellaneous lot of 50 articles, and a foreign set of 20.

The second was acquired by purchase, and consists of 156 arrow-heads, 11 stone axes, 3 stone balls with projecting discs, and 1 perforated hammer from Scotland; besides 16 large oval flint implements from Montana, U.S.

The additions to our collection of urns this year include several of the round-bottomed type, one "beaker" and one "food-vessel" from Dr Bryce's excavations in Bute, and another of the food-vessel type from Rosemarkie, recovered by the King's and Lord Treasurer's Remembrancer.

Many other prehistoric articles have been added this year by donation or purchase. But for once the additions to our prehistoric department have been eclipsed by the acquisition of a relic of historic times.

For the last twenty-five years the so-called "Queen Mary" harp and the Lamont harp, the property of the Stuarts of Dalguise, had lain on deposit in the Museum, an early offer to purchase them having been declined, on the ground that they were family heirlooms. But the direct line having recently become extinct, the heirs resolved to part with them, and, with scant courtesy, the first intimation of their purpose that we got was seeing the advertisement for their sale by auction, within so short a period that the Council had very little time to approach the Treasury for a special grant for their purchase. This was done, however, and a sum of £1000 was granted for the acquisition of one or both of the harps. But the conditions attached to the grant were so onerous that it was only with much hesitation and under protest that

the Council agreed to accept them. Only £400 was actually granted, the remaining £600 being made up by withholding for three years the annual grant of £200 for ordinary purchases of objects for the Museum and books for the Library.

The grant only sufficed for the purchase of the "Mary" harp, and £890 had to be paid for it. The price was unfortunately enhanced by the quite mythical attribution to Queen Mary: but, for us, the value of the harp consisted not in this, but in its being one of the three ancient harps existing in the United Kingdom, and in the beautiful Celtic carving which adorned it. The Council therefore felt that it would be a national loss if so fine and rare a relic were not acquired for the Museum, at however great a price.

The carving is difficult to make out now upon the harp itself; but a Fellow of the Society, Mr Robert Bruce Armstrong, with singular skill and patience, has traced the design with a needle-point on sheets of gelatine, and has produced a complete illustration of the harp and its decoration in coloured plates in his newly published beautiful volume, *The Irish and Highland Harps*, a copy of which he has presented to the Society, and which now lies on the table.

As the arrangement made with the Treasury was *pro rata*, the balance of £110 was returned to us, so that we were only mulcted in £90 for the present year, but we have the prospect of getting nothing for the next two years, so that for this long period the progress of the National Museum will be completely paralysed, unless the Treasury can be induced to repeal these obnoxious conditions.

Report of the Departmental Committee upon the Board of Manufactures.—In so far as this Report regards the National Museum of Antiquities, the Committee have made three important recommendations, founded upon the evidence of our President, who was the only member of the Society summoned before them:—

1. That the Society of Antiquaries should have the right of nominating one member of the reconstituted Board of Trustees.

2. That the annual grant of £200 for ordinary purchases of objects for the Museum, and the purchase and binding of books for the Library, should be made permanent, instead of being, as hitherto, renewable for a term of years.

3. That an addition of £200 a year should be made to the grant for maintenance.

The Council are encouraged to hope that these recommendations will be adopted.

The Treasurer submitted a statement of the Society's funds, which was ordered to be printed and circulated among the members.

The Secretary read the Annual Report to the Board of Trustees, as follows :—

Annual Report to the Board of Trustees for Manufactures in Scotland by the Society of Antiquaries of Scotland, with reference to the National Museum of Antiquities under their charge, for the year ending 30th September 1904 :—

During the past year the Museum has been open to the public as formerly, and has been visited by 15,674 persons, of whom 1189 were visitors on pay days and 14,485 on free days.

The number of objects of antiquity added to the Museum during the year has been 543 by donation and 270 by purchase. The number of books added to the Library has been 149 by donation and 28 by purchase.

Among the more important additions to the Museum during the past year may be mentioned the ancient Scottish Harp, purchased at the Dalguise Sale with the aid of a special grant from the Treasury, and the Collection bequeathed by the late Mr William Boyd, F.S.A. Scot., consisting of 395 specimens, chiefly from the Buchan district of Aberdeenshire.

D. Christison, *Secretary.*

MONDAY, 12*th December* 1904.

ROBERT MUNRO, M.A., M.D., LL.D., Vice-President, in the Chair.

A Ballot having been taken, the following were duly elected Fellows:—

Brigade-Surgeon Lieut.-Col. JAMES ARNOTT, M.D., 7 Rothesay Place.

FRANCIS CAROLUS EELES, Corr. Mem. S.A. Scot., Munross, Stonehaven, and 105 Adelaide Road, London.

SIR SIMON MACDONALD LOCKHART, Bart., of Lee and Carnwath, The Lee, Lanark.

JAMES INGALL WEDGWOOD, 36 Lord Mayor's Walk, York.

The following articles, acquired by the Purchase Committee for the Museum during the recess, 9th May to 30th November 1904, were exhibited:—

Large spheroidal Bronze Caldron, measuring 21 inches across the mouth and 15½ inches in depth, dug up in draining on the farm of Hattonknowe, on the estate of Darnhall, in the parish of Eddleston, Peeblesshire, and recovered by the King's Remembrancer. [See the subsequent communication by Mr William Buchan, F.S.A. Scot.]

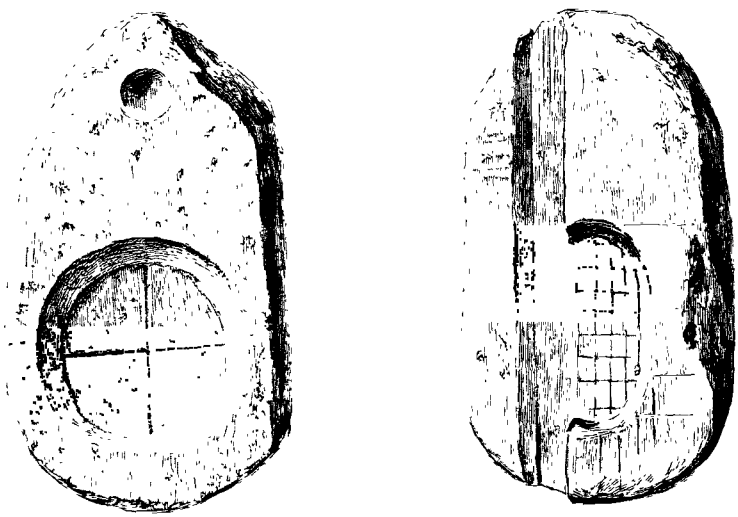
Sepulchral Urn of the Beaker or Drinking Cup type, measuring 7¾ inches in height by 5¾ inches diameter at the mouth and 3 inches at the base, found in a cist with an unburnt interment at Acharole, West Watten, Caithness, and recovered by the King's Remembrancer.

Small Collection of Flint Implements, etc., including a narrow leaf-shaped arrow-head, 2 inches in length, an arrow-head with barbs and stem, 1¾ inches in length and ⅝ of an inch in width at the base, and a small thick leaf-shaped arrow-head of red flint, part of a fabricator, 1⅝ inches in length, part of a flint knife, 1¼ inches in length, worked on one face only, several flakes of flint, one small amber bead.

and a whorl of grey sandstone, $1\frac{5}{8}$ inches diameter, found in ploughed fields at Nether Bonchester, near Hawick.

A small steel Crank-key for a watch.

Collection of Flint Implements from Torrs, Glenluce, consisting of four arrow-heads with barbs and stems, one large lozenge-shaped arrow-head, six point-ends of broken leaf-shaped arrow-heads, three portions of



Figs. 1 and 2. Obverse and reverse of Stone Mould found at Bennybeg, near Crieff. ($\frac{1}{3}$.)

knives, worked on one face only, one borer, $2\frac{1}{4}$ inches in length, one fabricator, $2\frac{1}{2}$ inches in length, five scrapers, and several flakes.

Stone Mould of greenstone (figs. 1, 2), $7\frac{1}{2}$ inches in length by $4\frac{1}{8}$ inches in width and $1\frac{1}{2}$ inches in thickness, having on one face a nearly circular moulding cavity, $3\frac{3}{4}$ inches in diameter, and on the other face a long ingot-like moulding cavity, with a flat oval cavity adjoining it, having chequer markings in the bottom, but not of the same depth. It was found in opening a quarry at Bennybeg, near Crieff.

A small conical jar of reddish ware, imperfect at the mouth, and measuring 6¼ inches in height and 3¼ inches in diameter at the bottom, tapering from the bottom to the mouth, where it is narrowest, the loop handle wanting, the exterior showing remains of a yellowish-green glaze. When found it contained 450 coins, of which nine were pennies of Alexander III., and the bulk of the rest were English pennies of Edward I. and Edward II., with a few foreign sterlings. The occasion of its discovery was the excavation of a sewage drain in Easteroft Park, Lochmaben, Dumfriesshire. [See the subsequent communication by Mr George Macdonald.]

The following Donations to the Library were laid on the table, and thanks voted to the Donors :—

(1) By J. H. Macadam, F.S.A. Scot., the Editor.

The Baxter Books of St Andrews, 1548–1861. 8vo. 1904.

(2) By Robert Bruce Armstrong, F.S.A. Scot., the Author.

Musical Instruments. Part I.—The Irish and Highland Harps. 4to. 1904.

(3) By D. Macritchie, F.S.A. Scot, the Author.

Shelta—The Caird's Language. Reprint. 8vo. Pp. 40.

(4) By Robert Munro, M.A., M.D., LL.D., *Vice-President*, the Author.

On the Date of the Upheaval which caused the Twenty-five-feet Raised Beaches in Central Scotland. Reprint from *Proceedings* of the Royal Society of Edinburgh. 8vo. Pp. 30.

(5) By Thomas May, F.S.A. Scot., the Author.

Warrington's Roman Remains—Fortifications, Potters' Kilns, Iron and Glass Furnaces, and Bronze Founders' and Enamellers' Workshops. 4to. 1894

(6) By P. M. C. Kermode, F.S.A. Scot., the Author.

Traces of the Norse Mythology in the Isle of Man. 8vo. 1904.

(7) By W. C. Mackenzie, F.S.A. Scot., the Author.

History of the Outer Hebrides. (Special Edition.) 8vo. 1903.

The following Communications were read:

I.

NOTES ON A BRONZE CALDRON FOUND AT HATTONKNOWE DARNHALL, IN THE COUNTY OF PEEBLES. By WILLIAM BUCHAN, F.S.A. Scot.

The bronze caldron which forms the subject of this paper was found in July last on the farm of Hattonknowe, belonging to Lord Elibank, in the parish of Eddleston and county of Peebles. A labourer called John M'Cafferty was opening an old tile drain when he came upon it about 3 feet below the surface. He extricated it with great care, emptied out the peat inside, and took the caldron home to his lodgings, where he kept it for about a week, and on the night of 20th July left it at my house in my absence. On returning next day I drove to Eddleston and visited the place with M'Cafferty and Constable M'Kenzie, the local policeman. The drain had been left open: it ran down a hollow amongst grassy knolls in a field about 1000 feet above sea-level. The soil was peaty and had been dug out about 3 feet, laying bare the old tiles. In the left-hand side of the drain, looking north, was a hollow from which the caldron had been excavated, and the marks of the outside ends of the rivets were still distinctly visible in the peat. The bottom of the drain was clay, and it was clearly apparent that the caldron had been resting in an upright position on the subsoil. The drain was said to have been cut about forty years ago, and the wonder is

that the labourers at that time did not come on the caldron, which must have been lying within a few inches of the side of the cutting. M'Cafferty said there was a birch stick lying across the caldron when found, and that he had emptied out the contents on the side of the cutting. I instructed Constable M'Kenzie to collect the peat which M'Cafferty had thrown out, and also some of the peat around the place where the caldron had been lying, and to send the whole down to



Fig. 1. Bronze Caldron found at Hattonknowe, Darnhall, parish of Eddleston, Peeblesshire. $\frac{1}{4}$

Peebles along with the birch stick. He did so, but I have not been able to discover anything of interest in the peat.

The caldron (fig. 1) is made of three sheets of thin light-coloured bronze, the two upper sheets riveted together at the ends to form the upper part of the vessel; the third sheet, which forms the bottom, is rounded into an egg-shape, and is fastened by a circular line of transverse rivets to the upper part. Beginning at the top, the upper sheets curve outwards from the inside to form a rim from $1\frac{1}{4}$ to $1\frac{1}{2}$ inches wide, with a hammered

striated transverse pattern: the rim then bends inwards and then outwards into three parallel semicircular mouldings, close together, going round the circumference, with the same striated ornament. The depth of the rim inside is $2\frac{1}{8}$ inches. Below the last moulding the caldron swells outwards with an ogee curve, and then slopes downwards to the transverse line of rivets joining the upper and lower sheets. The weight is barely 5 lbs. 10 oz., the breadth across the top (outside measurement) 21 inches, the depth $15\frac{1}{2}$ inches, the outside circumference at the widest 5 ft. $9\frac{1}{2}$ inches, and round the circumference where the upper and lower sheets join 5 ft. $1\frac{1}{8}$ inches. The bronze is thickest at the bottom; at the top it is extremely thin. The caldron is in a fair state of preservation, and is complete with the exception of one handle. Originally there were two of these, fastened to the upper part of the rim immediately above the perpendicular line of rivets. The remaining handle is a solid bronze ring $4\frac{3}{8}$ inches wide, outside measurement. It is about $\frac{1}{2}$ inch thick, with two faces bevelled to the outside and two to the inside. It plays freely in a bronze loop which is riveted to the rim. This loop has three semicircular transverse mouldings similar to those on the rim. The riveting is beautifully done: the ends of the rivets fastening the top sheets to the bottom sheet are flat on the inside of the caldron; on the outside they are rounded, are $\frac{1}{16}$ inch thick, project about $\frac{1}{16}$ inch, and are then cut square off. There is a small riveted patch on the widest part of the circumference.

This caldron may belong to the Late Bronze Age, and is probably some centuries anterior to the Christian era. From its position and surroundings, the caldron was probably hidden or abandoned in a wood containing or composed of birch trees. The existing handle was on the side next the drain, so that the missing handle (which cannot be found) was not knocked off by the labourers who originally cut the drain. It is possible, indeed, that the loss of the handle was the reason why the caldron was hidden or abandoned by its owner.

This caldron somewhat resembles two which are in our National Museum. The first (fig. 2) was found in 1768 in Kincardine Moss,

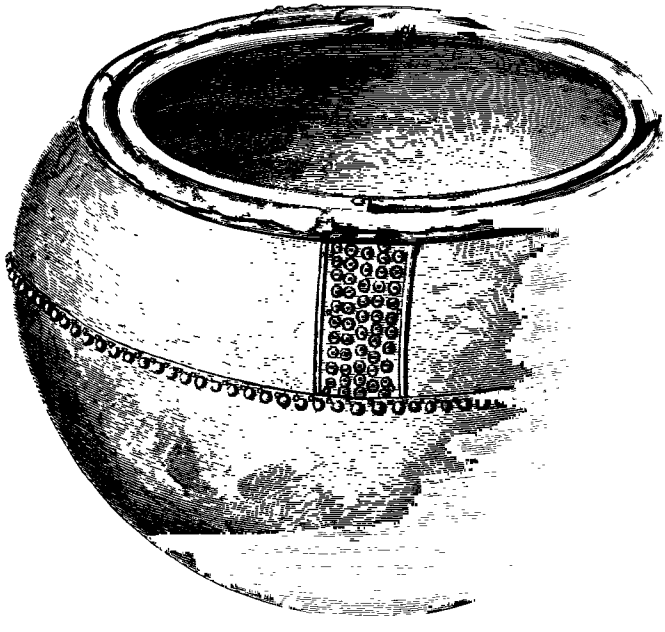


Fig. 2. Bronze Caldron found in the Moss of Kincardine. (¼.)

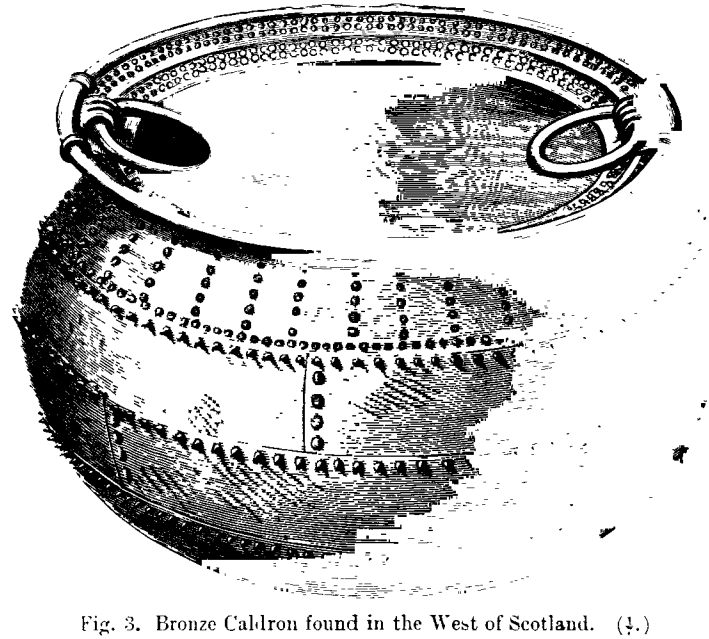


Fig. 3. Bronze Caldron found in the West of Scotland. (¼.)

Stirling, "upon the surface of the clay, buried under the moss," in circumstances somewhat similar to this one. The second (fig. 3) is from the West of Scotland. These caldrons are described in the Society's *Proceedings*, vol. xix. pp. 313, 314, and the illustrations are here repeated.

The Hattonknowe caldron differs from the first of these in having the rim formed of the same sheets of metal as the upper part of the caldron; the riveting is also different. From the second it differs in respect that the latter is formed of more sheets of bronze and the riveting is different. The handles of the second and their loops and fastenings are similar to the remaining handle and loop of the Hattonknowe caldron, which differs from both the Museum specimens in shape—they are globular, in colour they are much darker, and in weight they are much heavier.

Mr J. Romilly Allen, F.S.A. Lond., Editor of *The Reliquary and Illustrated Archæologist*, who saw a photograph of this caldron, writes me that he considers it intermediate in form between the round-bottomed caldrons of the end of the Bronze Age and the *situlæ* of the Hallstadt Period, which are flat-bottomed. A good example of the flat-bottomed caldron, found in Flanders Moss, Cardross, has been described and engraved on p. 37, vol. xxii., of the Society's *Proceedings*.

The round-bottomed or spheroidal caldrons have been found in Scotland, England, and Ireland, but, according to Sir John Evans (*Ancient Bronze Implements of Great Britain*, p. 414), they appear to be unknown beyond the British Isles. Dr Munro, however, in his *Lake Dwellings of Europe*, p. 290, states that both the round- and the flat-bottomed have been found in the Oppidum La Tène, and on fig. 92, Nos. 18 and 19, he shows two specimens of round-bottomed caldrons, which appear, however, to be much smaller than the large specimens which have been found in the British Isles. The *situla* or bucket-shaped caldron has been found in Scotland, England, and Ireland, and is also widely diffused on the Continent, occurring in Italy, Austria, Hungary, North Germany, Scandinavia, and France.

In *The Ulster Journal of Archæology* for the year 1857, vol. v. p. 82, there is a paper by Mr Robert MacAdam on a bronze caldron found in County Down. He gives a number of interesting references in ancient Irish and Welsh literature, showing that caldrons were, of old, valued possessions of princes and chiefs, and that some of them were alleged to possess magical properties The following quotations from Mr MacAdam's paper may be of interest:—"The cauldron seems to have been considered an important article among the ancient Irish. Mention of it occurs in various old poems, romances, and annals. Thus, in the romantic tale of the *Battle of Magh-Rath*, or the *Banquet of Dun na n-Gedh* (published by the Irish Archæological Society), which the Editor assigns to the twelfth century, one of the incidents is the borrowing of the royal cauldron in the king's house; and a number of other celebrated cauldrons are enumerated, with the names of the places where they were kept." . . . "Perhaps the most curious notice of cauldrons is that contained in the will of Cahir Mor, King of Leinster, and afterwards monarch of Ireland in the second century, which is preserved in the *Book of Lecan*, and also in the *Book of Ballymote*. In a remarkable inventory there given of the valuable articles bequeathed by him to his family are particularised fifty copper cauldrons."

"Various superstitions were connected with Irish cauldrons. Amongst the remarkable objects said to have been brought to Ireland by the colony of the Tuatha de Danaan was a cauldron called *Coirean Daghda*, which had certain magical properties. One of the cauldrons enumerated in the romance already quoted (the *Battle of Magh-Rath*) was called the *Caire Ainsicen*, and was of such a nature that 'no one went away from it unsatisfied; for whatever quantity was put into it, there was never boiled in it but what was sufficient for the company, according to their grade or rank.' . . ." This caldron is specially interesting to us because it was one of the chief possessions of Eochaidh Buidhe, King of Dalriada, and was kept in his residence at Dunadd (Argyleshire), where he used it to feast the host of Alba and the King of Ulster before the battle of Magh-Rath.[1]

[1] See the account of Dunadd by Capt. Thomas in the *Proceedings*, vol. xii. p. 33.

In Spain, in later times, the caldron seems to have been one of the *insignia* of a military leader. In Dr Woodward's *Heraldry*, vol. i. p. 405, it is said: "The caldron or cooking-pot which appears in the coats-of-arms of so many great Spanish families ought perhaps rather to be counted among the military charges. The *Pendon y Caldera* were presented by the sovereign to the newly created *Ricos hombres*, or Knights Bannerets—the banner denoting authority to levy and lead troops, the caldron the ability to feed them. . . . Out of these caldrons often issue a number of eels, which are usually blazoned as serpents, as in the arms of Guzman, Dukes of Medina-Sidonia, etc.—azure two caldrons in pale chequy or and gules, the handles and five serpents issuing at the junction of the handles with the caldron, all compony of the second and third. The whole within a bordure-compony of the arms of Castile and Leon . . ."

In addition to the references already given, Mr Romilly Allen has kindly furnished me with the following, which I have consulted so far as I could obtain access to the books, viz.—Sir Wm. Wilde's *Catalogue of the Museum of the Royal Irish Academy*, p. 530; *Ulster Journal of Archæology*, vol. v. p. 84, from which I have already quoted; *Journal of the Royal Society of Antiquaries of Ireland*, series 5, vol. vii. p. 437, and series 5, vol. ix. p. 256; E. P. Shirley's *Account of Farney, in the Province of Ulster*, p. 185; *British Museum Bronze Age Guide*, p. 48; *Revue Archéologique*, N.S., vol. vi. p. 237; *Manadsblad of the Stockholm Society for* 1889, p. 125; *Proceedings of the Royal Irish Academy*, series 3, vol. v. p. 346.

When I received this caldron I reported the circumstances, as Procurator-Fiscal, to the Exchequer, who claimed the caldron, placed it in the National Museum, and compensated the finder.

II.

SCULPTURED AND INSCRIBED STONES IN JEDBURGH AND VICINITY. By WALTER LAIDLAW, F.S.A. Scot.

Jedburgh, the county town of Roxburghshire, is of great antiquity, and is often mentioned in early Scottish history. In a footnote in the new edition of Chalmers' *Caledonia*, vol. i. p. 426, we have this valuable information, which he gives as a quotation :—

(Smith's *Bede*, i, iv, cap. xxvi. app. No. ii.; Simeon of Durham, col. 69–139.) Egred, the Bishop of Lindisfarne, who died in A.D. 845, built the two villages of Geddewarde and Geinforde in Roxburghshire, with the churches thereof, which he gave to the bishopric with other towns (*Anglia Sacra*, vol. i. p. 698).

Jedburgh in after times became occasionally a royal residence. There are many objects of historical and antiquarian interest in the town and district. The earliest are probably the two cup- and ring-marked stones discovered in Jedburgh.

No. 1 (fig. 1), which is of rather unusual type, has been already described and illustrated both in the *Transactions of the Berwickshire Naturalists' Club* in 1864, p. 161, by Mr George Tate, F.G.S., and also in the *Archaic Sculpturings*, by Sir James Simpson. The stone, which is about 18 inches broad, is now in the possession of the Rev. Adam Scott Matheson, Dumbarton.

No. 2 (fig. 2) is a sculptured stone, with incised ring- and cup-symbols, discovered by me in Jedburgh Abbey in 1903. It is of yellow sandstone, 1 foot 8 inches long, 9½ inches broad, 4 inches thick.

No. 3 (fig. 3). This stone, which was described by Dr Collingwood Bruce in the *Proceedings* of the Society in May 1885, forms the lintel over the entrance to the north-west turret of Jedburgh Abbey. Several erroneous readings of the Roman inscription upon it had been given, notably in Jeffrey's *History of Roxburghshire*, vol. i. p. 254, and in the *Archæological Journal*, vol. xxxiii. p. 365. In 1885 I got permission



Fig. 1. Cup- and Ring-marked Stone found in Jedburgh.
(From a photograph by W. Blain, Dumbarton.)

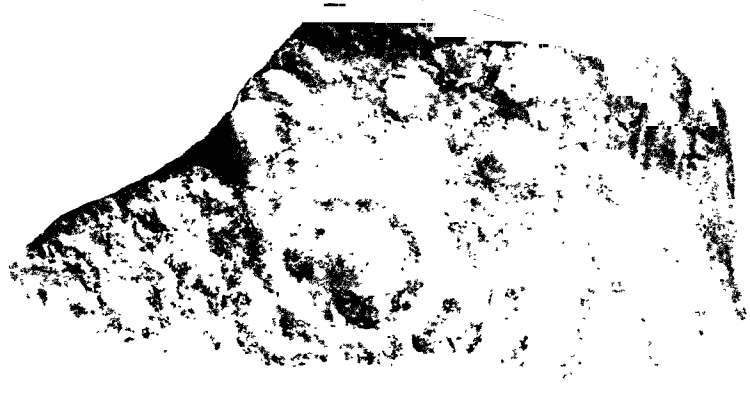


Fig. 2. Cup- and Ring-marked Stone found in Jedburgh.

from the Marquis of Lothian to take a cast of the stone, and this I sent to Dr Bruce. The reading which he sent me, and which may be taken as being correct, was published at the time in the *Proceedings* of the Society, vol. xix. p. 321; and I may add that Professor Hubner of Berlin and Mr F. Haverfield of Oxford agree with it. The reading, when the contractions are expanded, is as follows:—*Ioci Optimo*

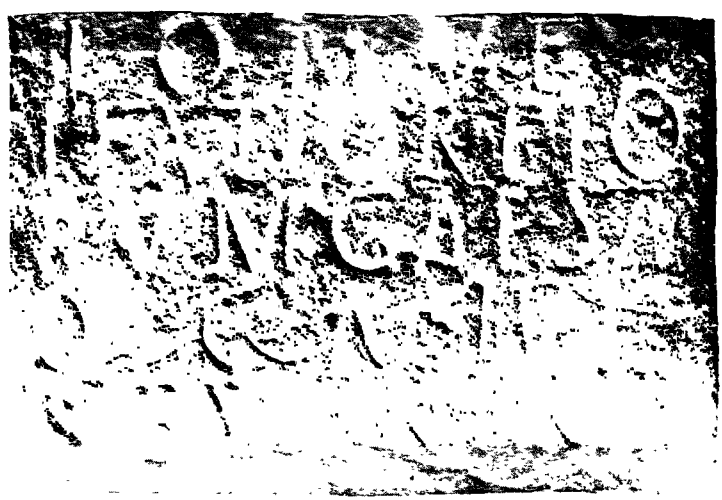


Fig. 3. Roman Inscription on a Stone forming a lintel in the north-west turret at Jedburgh Abbey.

Maximo, vexillatio Retorum gaesatorum quorum curam agit Julius Severinus tribunus; and may be thus translated:—To Jupiter, the best and greatest, the vexillation of the Rhaetian Spearmen, under the command of Julius Severinus, the tribune [erected this].

No. 4 (fig. 4). This is a portion of a Roman tablet, sculptured in relief. On the bottom of the left side is the figure of a boar, the badge of the Twentieth Legion. It was found during the course of excavating the Roman station at Cappuck, Oxnam, in 1886, and was



Fig. 4. Legionary Tablet of Twentieth Legion.

then described by me in the *Transactions of the Berwickshire Naturalists' Club*, but not illustrated. The stone, which is 1 foot long and 8 inches broad, is now in the private museum at Monteviot. A cast of it is in the National Museum.

No. 5 (figs. 5, 5A, 5B, 5C) is the lower part of a cross-shaft of sandstone which stands a little to the west of Hartrigge House, near Jedburgh. The measurements are as follows: 4 feet 4½ inches in height by about 3 feet 3 inches, and 2 feet 6 inches in thickness. This stone has been already described in the *Proceedings* of the Society, as also in the *Early Christian Monuments of Scotland*, and an illustration of the east side of it given. I, however, consider the stone to be of sufficient importance to give the illustrations of all four sides.

No. 6 (fig. 6) is one of three Celtic slabs preserved in the north transept of Jedburgh Abbey. It is a well-preserved slab, with sculpture in relief, 2 feet 6 inches long and 2 feet 2 inches broad. This stone has been described and illustrated in Stuart's *Sculptured Stones of Scotland*, as also in the *Early Christian Monuments of Scotland*. It is a very interesting example of the tree-like form of the foliageous-scroll ornament, with birds and beasts feeding on its fruits. This also occurs at Ruthwell on the inscribed cross, and in a more modified form at Tarbat and Hilton of Cadboll, Ross-shire.

No. 7 (fig. 7) is a slab of sandstone, with an interlaced pattern sculptured in relief, 4 feet 8 inches high by 1 foot wide by 6 inches thick. The front and one end are ornamented with interlaced work. This stone has been described and illustrated in Stuart's *Sculptured Stones of Scotland*, and also in *Early Christian Monuments of Scotland*, part iii. p. 435.

No. 8 (fig. 8) is a slab of sandstone 4 feet 7 inches in length by 9 inches wide by 4 inches thick, sculptured in relief on the front face with an interlaced pattern of knot-work, and on one side with a plait of two strands.

No. 9 (fig. 9) is a portion of a cross-shaft of sandstone, 1 foot 4 inches in length by 7 inches in breadth and 4 inches in thickness, with a

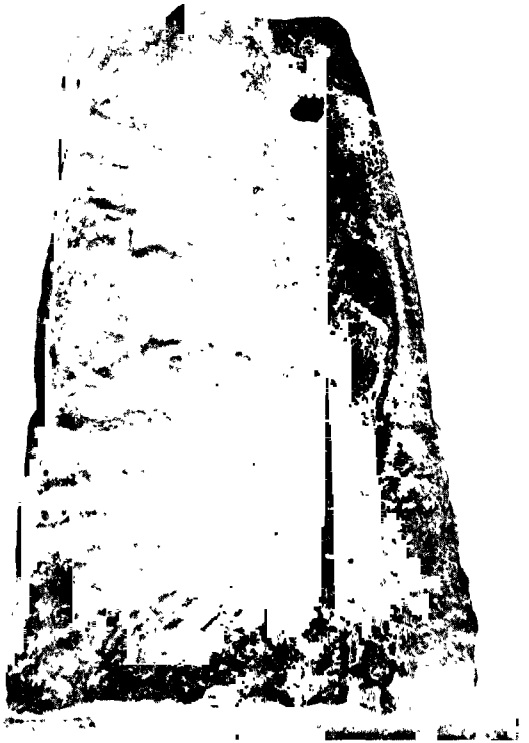


Fig. 5. Base of Cross-shaft, sculptured in relief, at Hartrigge, near Jedburgh. North side.



Fig. 5A. Base of Cross-shaft, sculptured in relief, at Hartrigge, near Jedburgh. East side.



Fig. 5b. Base of Cross-shaft, sculptured in relief, at Hartrigge, near Jedburgh. South side.



Fig. 5c. Base of Cross-shaft, sculptured in relief, at Hartrigge, near Jedburgh. West side.



Fig. 6. Slab, with sculpture in relief, preserved in Jedburgh Abbey.

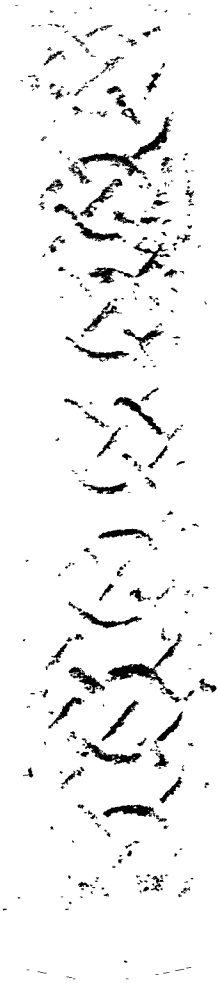


Fig. 7. Slab, with sculpture in relief, at Jedburgh Abbey.



Fig. 8. Slab, with sculpture in relief, at Jedburgh Abbey.

rope-moulding at one corner and a pattern of a leafy scroll on one face, the other sides broken away. It was found in taking down the manse at Jedburgh in 1878.

No. 10 (fig. 10) is a fragment of a cross-shaft sculptured in relief, 12 inches by 9 inches and 4½ inches thick. This stone has not been previously described or illustrated, having been discovered by me in



Fig. 9. Part of Cross-shaft found in taking down the old manse at Jedburgh.

the summer of 1903 in a garden near Auchrum. The person from whom I procured it can give no information as to where it came from. I have succeeded in taking an excellent cast for the National Museum.

No. 11 (fig. 11) is a stone sculptured in relief, very much weather-worn, showing a horseman with long spear attacking wild beasts. It forms the tympanum above the entrance of Linton Church. There have been many attempts to explain the meaning of the figures on the

sculptured stone, but no one as yet has been able to say what they really represent. It has been figured in the *Proceedings* of the Society, vol. xvii. p. 335.

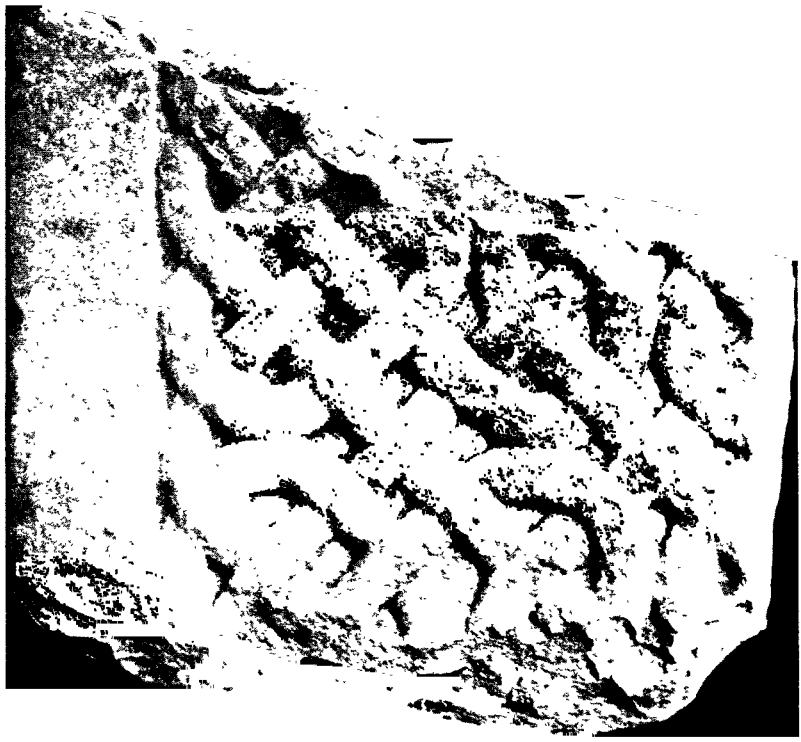


Fig. 10. Fragment of Cross-shaft, sculptured in relief, found in a garden at Ancrum.

No. 12 (fig. 12). This is a recumbent grave-cover with sculpture in relief. It is 5 feet 4 inches long by 14 inches wide. The stone was found in digging a grave in Oxnam Churchyard, and was brought down to the

manse garden to do duty as a pillar for a sundial. I had it taken up in the summer of 1903, and it now stands against the garden wall. There is upon the front a Calvary cross sculptured in relief nearly the whole length of the stone. The date "1853" is hewn on the stone, and is supposed to be the date of its discovery.

No. 13 (fig. 13) is a fragment of a grave-cover in Oxnam Churchyard, close to the vestry door. I had it taken up and measured in 1903, and found it to be 3 feet 9 inches long by 14 inches wide, and sculptured in relief with the cross, and a band of cable ornament.

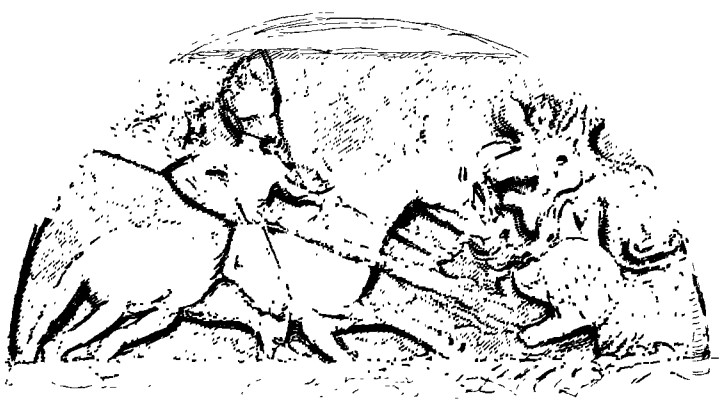


Fig. 11. Tympanum above the lintel of Linton Church.

No. 14 is a grave-cover in Linton Churchyard, 5 feet 2 inches long by 1 foot 9 inches at the top by 14 inches at the bottom, with a moulding in relief, apparently composed of two bands twisting together down the centre, the stone being worn and covered with lichen.

No. 15 is portion of a grave-cover in the manse garden at Yetholm. It is 2 feet 5 inches long by 13 inches wide, and shows on the lower part of the stone the base of a Calvary cross incised with four steps.

No. 16 (fig. 14) is the upper portion of a grave-cover at Yetholm. This stone, which is 2 feet 6 inches long by 1 foot 5 inches wide, now

stands with the top end down in the manse garden at Yetholm. It is sculptured partly in relief and partly incised, showing the upper portion



Fig. 12. Grave-cover found in Oxnam churchyard.

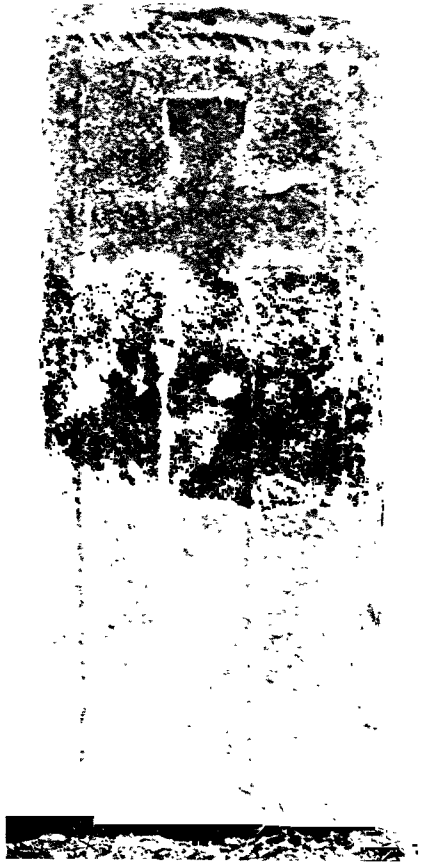


Fig. 13. Part of a Grave-cover in Oxnam churchyard.

of a floriated cross, and part of a sword with oval pommel and straight cross-guard.

No. 17 (fig. 15) is a stone, sculptured in high relief, at Southdean. This stone measures 2 feet 9 inches long by 1 foot 9 inches wide, and was taken from the ruins of the old church and placed on its present position on the wall of Southdean farmsteading, which is near by.

No. 18 consists of two architectural fragments at Southdean. One is 18 inches by 10 inches, the other 17 inches by 8 inches. They



Fig. 14. Portion of a Grave-cover at Yetholm.



Fig. 15. Stone, sculptured in high relief, from Southdean.

are now used as copestones for the dyke on the west side of the ruins of Southdean church. The cusps and grooves show that the stones would form part of a decorated window in the church. Two other architectural fragments of similar character are in the churchyard at Eckford.

No. 19 (fig. 16) is a grave-cover with a curious composite cross, with Calvary base and circular head, the shaft crossed by three supplementary

arms, sculptured in relief, in Eckford churchyard. This stone was discovered in 1898 while making alterations on the church. It is 4

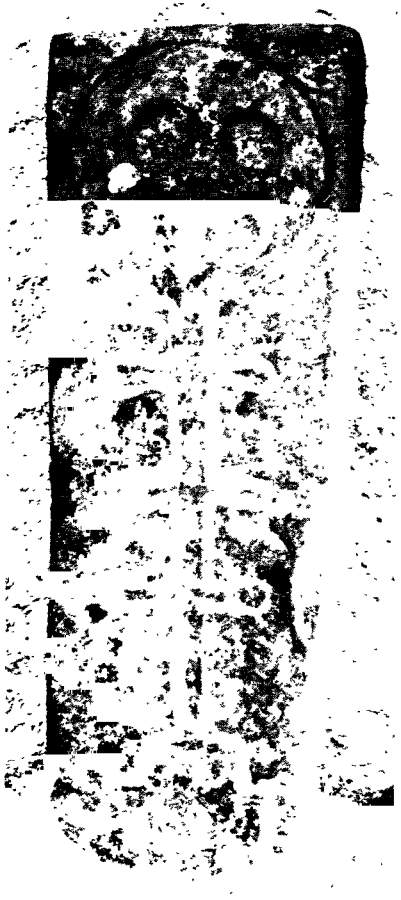


Fig. 16 Grave-cover in Eckford churchyard.

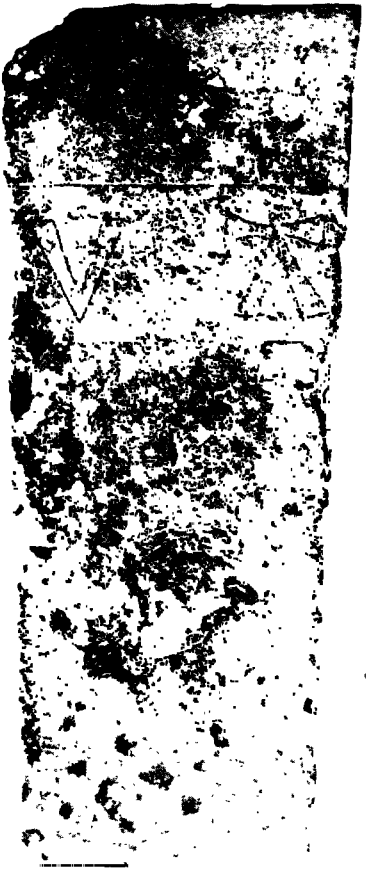


Fig. 17. Grave-cover in the nave of Jedburgh Abbey.

feet 9 inches long by 1 foot 9 inches at the top by 1 foot 4 inches at the bottom. There is on the right side the shape of shears.

No. 20 (fig. 17) is a grave-cover in the nave of Jedburgh Abbey, with two initials, apparently of later date, incised near the top. It is 5 feet 4 inches in length by 1 foot 6 inches in breadth at the top and 1 foot 4 inches at the bottom.

No. 21 (fig. 18) is a coped grave-cover in Nisbet churchyard. It is of sandstone, 5 feet 4 inches in length by 1 foot 5 inches in width by 1 foot 3 inches at the foot. It has a flat top, 6 inches in width, on which is the form of a cross, but much weatherworn. The sloping sides are covered with rows of semicircular scale ornament.

No. 22 (fig. 19). The armorial bearings on Queen Mary's House, Jedburgh, are on the front, above an arched doorway. The arms are

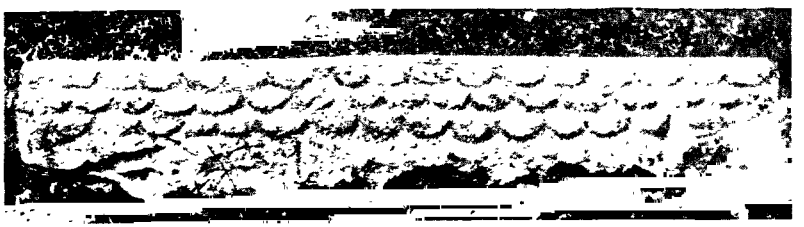


Fig. 18. Coped Grave-cover in Nisbet churchyard.

those of Wigmore impaling Scott as wife's arms. There is no mention of a daughter of the Buccleuch family having married a Wigmore. She may have been of a younger branch, but not of the Thirlstane or Howpaisly line, who had a difference. As for Wigmore, Mr Burnet made investigations and found records of a considerable burgess family of that name in Edinburgh in the fourteenth century, and also of Sir Roger Wigmore, but no record of an alliance with Scott or connection with Roxburghshire. The arms of Wigmore are argent on a bend sable, a ribbon dancetté of the field; motto "Avis la fin." The Scott arms are, or on a bend azure, a mullet between two crescents of the field; motto, "Solum Deo confido."

No. 23 is a shield on the Piper's House in Duck Row, Jedburgh. On

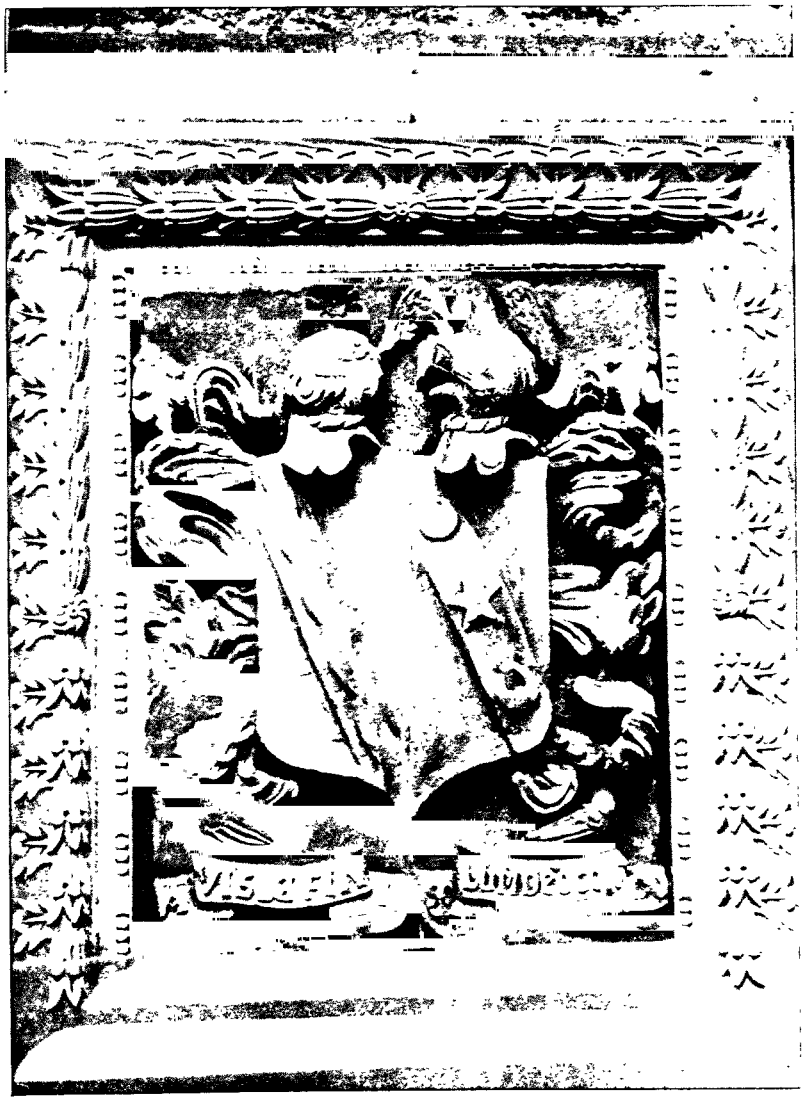


Fig. 19. Arms on Queen Mary's House.

the shield are the initials A. A., which stand for Adam Ainslie, also J. A., the initials of his wife Janet Ainslie, with the date 1604.

No. 24 (fig. 20) is a boss in the choir chapel of Jedburgh Abbey. On it is a shield with the arms of Scotland, a lion rampant within a double tressure flory counter flory.

No. 25 (fig. 21) is an interesting monogram in Hundalee farmhouse.



Fig. 20. Armorial Shield on a boss in Jedburgh Abbey.

The initials R. K. C. H. stand for Robert Kerr and Christian Hamilton, with the date 1667. The lintel was brought from the old house, which stood a little to the south-west of the new one. Robert Kerr was the third Lord Jedburgh, who married Christian, daughter of Sir Alexander Hamilton of Innerwick.

No. 26 (fig. 22) is a small cross in Nisbet churchyard, 2 feet 1 inch long by 1 foot across the head. The slab is pierced with four holes



Fig. 21. Monogram and Date on a lintel at Hundalee.



Fig. 22. Cross and Sculptured Fragment in Nisbet churchyard.

through the angles between the arms of the cross. Alongside of it is shown a portion of a sculptured stone 1 foot 4 inches long by 11 inches at the top and 9 inches at the bottom, sculptured on one side with the chevron or zigzag ornament. As this kind of ornament belongs to the Norman period, it is probable that this stone is coeval with the old church of Nisbet, which is mentioned as early as 1220. No vestige of the church now remains.



Fig. 23. Small Cross in Eckford churchyard.

No. 27 (fig. 23) is a small cross in Eckford churchyard, measuring 1 foot 7 inches in height by $12\frac{3}{4}$ inches in breadth.

No. 28 (fig. 24) is a free standing cross in the Abbey churchyard, Jedburgh. It is 2 feet 4 inches high by 1 foot 5 inches wide at the top, 8 inches at the bottom, and $7\frac{1}{4}$ inches in thickness. The inscription on the stone is almost obliterated, but the date, 1602, is quite plain, and is the oldest date I have found on any of the monuments in the churchyard. It stands on the left side of the road leading to the Abbey.

No. 29 (fig. 25). Sketch of the upper portion of a grave-cover, with part of a cross sculptured in relief, used as a covering-slab to the wall passage in the south transept of Jedburgh Abbey. The original length would be about 6 feet. The wall into which it has been built seems to belong to the early part of the twelfth century.



Fig. 24. Free-standing Cross in Jedburgh churchyard.

No. 30 (fig. 26). Shield, bearing a bull's head and pastoral staff, on a buttress in Jedburgh Abbey. The arms are supposed to be those of William Turnbull, Bishop of Glasgow. Jedburgh being within the see of Glasgow, and Bishop Turnbull belonging to the Jedburgh district, it is quite likely that he helped to repair the Abbey. He died in 1454.

No. 31 (fig. 27). This is the armorial bearings of Sir Andrew Kerr on Fernieherst Castle. Sir Andrew Kerr was the first Lord Jedburgh, Baron of Fernieherst, and one of the Lords of His Majesty's Privy Council. He was created Lord Jedburgh in 1622. His arms are a chevron charged with three mullets of the field: crest, a buck's head: supporters, two savages: motto, "FORWARD IN YE NAME OF GOD,"

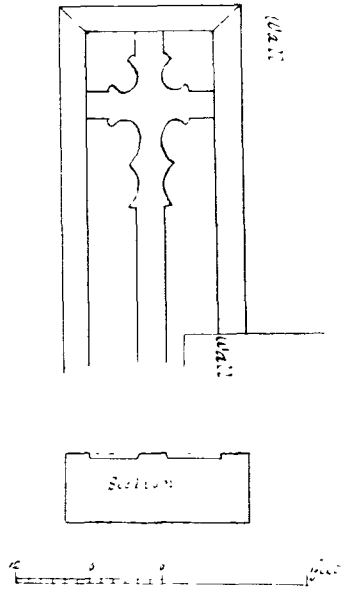


Fig. 25. Grave-cover built into wall passage of south transept of Jedburgh Abbey.

above the crest. Beneath the shield is the motto, "Soli Deo," while the date 1598 is also given. The last-mentioned motto is only to be found on these armorial bearings on Fernieherst Castle, and has since been dropped by the family. The arms having become much obliterated, were reproduced in 1898.

No. 32 (fig. 28) is the armorial bearings of Dame Ann Stewart on Fernieherst Castle. She was the daughter of Lord Stuart of Ochiltree,



Fig. 26. Shield of Arms of Bishop Turnbull on a buttress at Jedburgh Abbey.



Fig. 27. Arms of Sir Andrew Ker on Ferniehurst Castle

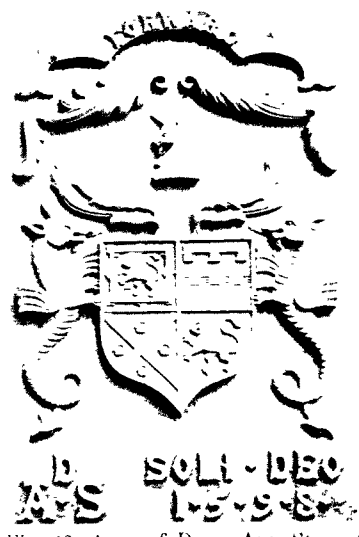


Fig. 28. Arms of Dame Ann Stewart on Ferniehurst Castle.



Fig. 29. Arms of John Hall, Abbot of Jedburgh.

and wife of Sir Andrew Kerr. Her armorial bearings were a lion rampant, saltire between four roses ; crest, a unicorn's head : supporters, two dragons : mottoes, "Forward," "Soli Deo," with the date 1598. These arms also were reproduced in 1898.

No. 33 (fig. 29). Shield, sculptured in relief, built into the wall above

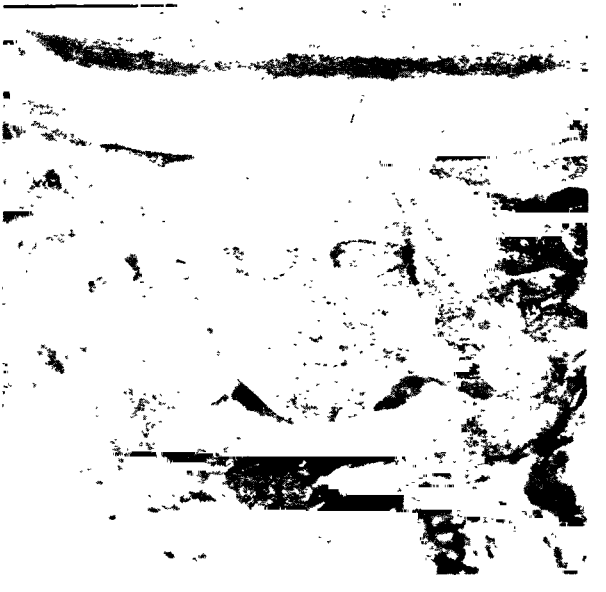


Fig. 30. Sculptured Corbel at Jedburgh Abbey.

a Norman arch on the east side of the north transept in Jedburgh Abbey. In addition to the inscription, which is easily made out, is the pastoral staff of the Abbot, John Hall, who was appointed Abbot in 1478. It is evident that Hall has helped to restore the Abbey, as his name is to be found on different parts.

No. 34 (fig. 30) is a sculptured corbel in the choir chapel of Jedburgh Abbey.

No. 35 (fig. 31) shows fragments of two piscinas in Jedburgh Abbey, the figure at the left-hand side showing the under side of one which is sculptured, the upper side being plain.

No. 36 (fig. 32) is the initials of Thomas Cranston and a pastoral



Fig. 31. Two Piscinas in Jedburgh Abbey.

staff sculptured in relief, built into the north pier of the tower in Jedburgh Abbey.

No. 37 (fig. 33) is a shield, sculptured in relief, on the south pier of the tower in Jedburgh Abbey. On the field are three cranes passant, two pastoral staves, with the initials T. C., which stand for Thomas Cranston, who was Abbot in 1484, and helped to restore the Abbey.

No. 38 (fig. 34) is a shield, sculptured in relief, on a house near the foot of the Canongate in Jedburgh. On the dexter side are the arms of William Ainslie of Blackhill, and on the sinister side are the arms of his wife Cicely, daughter of Sir John Scott, first baronet of Ancrum.

No. 39 (fig. 35) are the arms of Robert Blackadder, the Bishop of Glasgow, afterwards the Archbishop. The shield, which is not in its



Fig. 32. Initials of Abbot Thomas Cranston on the north pier of the tower, Jedburgh Abbey.

original place, is under the large window in the north transept of Jedburgh Abbey. On the field is the chevron bearing three roses. Above the cross, on one side is the letter R, on the other the letter B, which stand for Robert Blackadder. It is believed that Archbishop Blackadder helped to restore the Abbey, as his name is to be found on different parts. He died in 1508.



Fig. 33. Arms of Thomas Cranston, Abbot of Jedburgh.

No. 40 (fig. 36). Nondescript birds, etc., sculptured in high relief, upon one of the capitals of the west Norman doorway in Jedburgh Abbey.



Fig. 34. Arms of Amslie of Blackhill.

No. 41. Human figures, grotesque animals, and chevron ornament sculptured in relief, on the old Norman doorway of Jedburgh Abbey.



Fig. 35. Arms of Robert Blackadder, Archbishop of Glasgow.



Fig. 36. Sculptured Capital in west doorway of Jedburgh Abbey.

This doorway having become much decayed, the Marquis of Lothian in 1876 caused a facsimile to be erected a little to the west on the same wall. Sir Gilbert Scott says of this and the west doorway, "They are two of the most exquisite gems of architectural work in the island."

No. 42 (fig. 37). The armorial bearings of Robert, Lord Jedburgh,



Fig. 37. Armorial Bearings of Robert, Lord Jedburgh, in Jedburgh Abbey.

in the north transept of Jedburgh Abbey. The stone, which is 6 feet 4 inches high, 3 feet 8 inches broad, and 10 inches thick, stands against the north wall. The upper part of the stone is occupied by a shield, coronet, and helmet, with the arms, on a chevron, three mullets; crest, a buck's head; supporters, two roebucks, with motto "FORWARD" on a scroll. The under part of the stone is occupied by an inscription in Roman capitals, viz.—

3589

HERE . LYES . THE . NOBLE . LORD
ROBERT . LORD . JEDBRUGH .
WHO . DIED . THE . 4 . OF . AGUST .
1692 . ÆTATIS . 63 .

No. 43 (fig. 38) is part of a unicorn which formed the top of the ancient cross of Jedburgh.



Fig 38. Part of a Unicorn which formed the top of the ancient cross of Jedburgh.

No. 44 (fig. 39) shows two stones found when making alterations on Oxnam church in 1879, and now built into the east wall of the churchyard.

No. 45 (fig. 40) is a slab of sandstone, 1 foot 9 inches long by 1 foot 6 inches broad, discovered by Mr James Mabin, builder, while taking out a found for a house in Canongate of Jedburgh in 1903. The face of the stone is occupied with holes, the largest of which is 3 inches in

diameter. As a cannon ball which suits the largest holes has since been found at the same place, it may be taken as sufficient proof that the slab has formed part of a matrix for casting cannon balls of different sizes.

No. 46 (fig. 41) is photographed from a cast taken by me in 1903 from the bell presented by Robert, Lord Jedburgh, to the kirk of Jedburgh in 1692—the year in which he died. It measures 24 inches

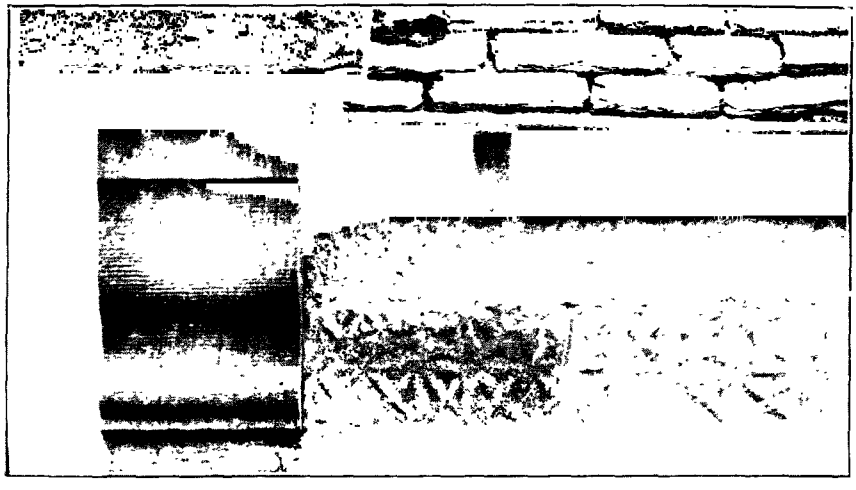


Fig. 39. Two Stones with tooth ornament found at Oxnam.

in height, 30 inches across the mouth, is richly embossed, and is now in the clock steeple. On the bell is a medallion with the arms of Lord Jedburgh, and the following inscription in Roman capitals—

ROBERT . LORD . IEDBURGH . HIS . GIFT . TO . THE .
KIRK . OF . IEDBWRG . 1692 . IOHN . MEIKLL . ME .
FECIT . EDINBURGI

[The blocks of figs. 4, 19, 29, 33, and 34 have been lent by Mr Laidlaw, who also supplied the whole of the photographs, taken expressly for this paper by Mr R. Jack, photographer, Jedburgh.]

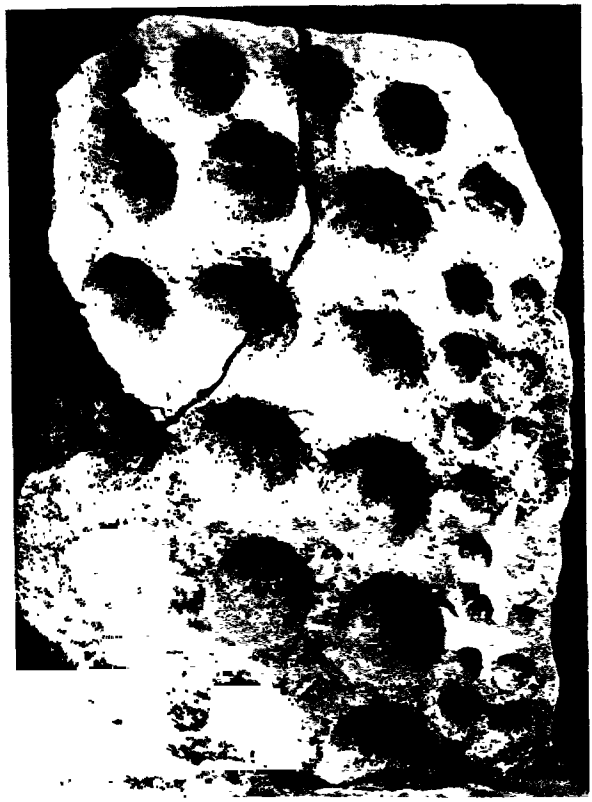


Fig. 40. Half of a Mould for casting cannon balls of different sizes, found in Jedburgh.



Fig. 41. Inscription on a bell in Jedburgh church.

III.

ADDITIONAL NOTES ON THE KIRKYARD MONUMENTS OF THE SCOTTISH LOWLANDS. By DAVID CHRISTISON, M.D., Secretary.

In a former paper[1] I communicated to the Society an illustrated description of some seventeenth and eighteenth century tombstones in Scottish kirkyards, chiefly in the Mearns, Angus, Perth, Fife, and Midlothian. Since then, kind friends have sent me photographs of examples from various parts of Scotland, and I have had opportunities of seeing a few here and there, but it was not till last autumn that I was able to add any considerable number myself, a residence for two months at Aberfoyle having given me the command by rail and cycle of the ancient province of Menteith and its neighbourhood. This district I had formerly partially dealt with, but I was now able to fill in the blanks and complete the record of the more interesting examples in the kirkyards for the whole country between Dunblane and Stirling on the east and the southern end of Loch Lomond on the west.

In the first part of the present description I shall take up the kirkyards of this district according as they are localised in the valley of the Forth, or in Strathendrick and Strathblane; and in the second part, the new material from miscellaneous quarters.

Part I.

Menteith and its Neighbourhood.

A. The Valley of the Forth.

1. *Aberfoyle.*—A good many old slabs lie on the ground around the abandoned ruined church. Most of them are plain, either from decay or because they never had been inscribed. The most ancient date I saw was 1623 on a slab with incised skull and crossbones, surrounded by

[1] "The Carvings and Inscriptions on the Kirkyard Monuments of the Scottish Lowlands," *Proceedings*, vol. xxxvi. pp. 280–457, 1901–2.

MEMENTO MORI, and with an almost quite illegible marginal inscription. Another of 1701 has the same emblems, and the rather common warning to the passer-by that he must soon be as the occupant of the grave.

A specially interesting monument is a slab to a celebrated former minister of the parish, Mr Robert Kirk. At the lower end a crossed sword and pastoral staff, surmounted by a thistle (fig. 1), are incised.

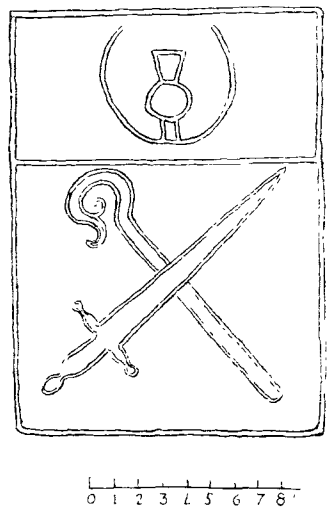


Fig. 1. Aberfoyle, Perth.

The original inscription was rapidly disappearing, and as it could not be successfully re-cut on the old letters, the present incumbent, the Rev. W. M. Taylor, caused it to be renewed in capitals:—

HIC SEPULTUS
ILLE EVANGELII
PROMULGATOR
ACCURATUS
ET
LINGUÆ HIBERNLE

LUMEN
M. ROBERTUS KIRK
ABERFOILE PASTOR
OBIIT 14 MAII 1692
ÆTAT. 48

A headstone with common emblems of mortality I represent in fig. 2, *a*,

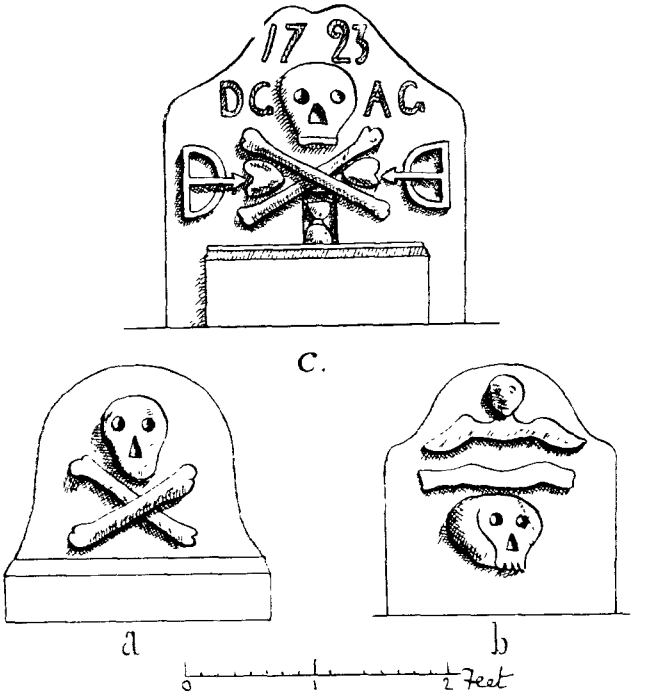


Fig. 2. *a*, *c*, Aberfoyle: *b*, Callander, Perth.

chiefly because it is so unusually small, being only 16 inches wide at the base and about the same height. Another (fig. 2, *b*), not found here, however, but at Callander, is only 15 inches by 14. A third, an Aberfoyle stone (fig. 2, *c*), dated 1723, is not much larger—18 inches by 15—but is more interesting, as in the upper and lower angles of junction

of the crossbones it bears a skull and an hourglass, and in the right and left angles a heart, with a bow and strung arrow, whose point almost touches the heart: a unique design.

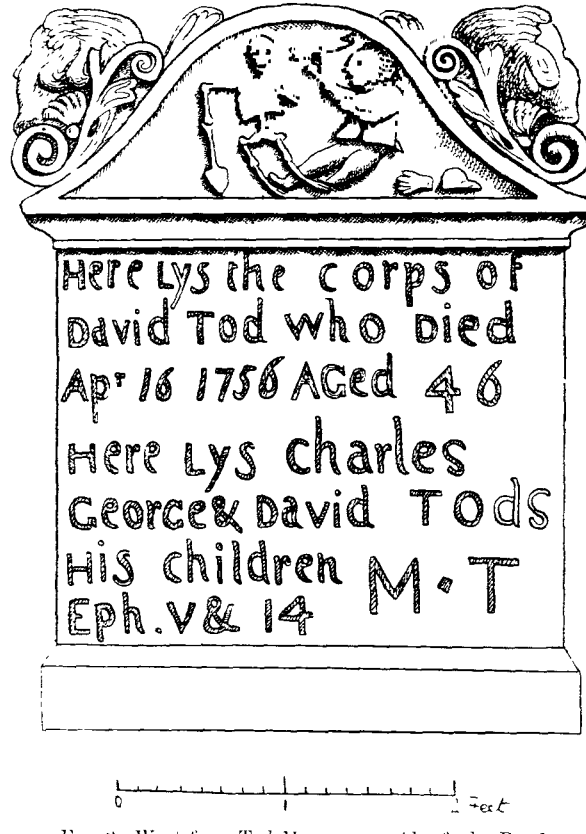


Fig. 3. West face, Tod Monument, Aberfoyle, Perth

But an equally unique and much more elaborate headstone is one dated 1756, in memory of David Tod. The inscription is on the west face (fig. 3), and is surmounted by a skeleton Death, with spade in one hand and dart in the other (enlarged view, fig. 4), with which he has

transfixed the strangely costumed figure of a man who grasps the spear with one hand and brandishes a feeble nondescript weapon in the other. The hair is elaborately dressed, and the costume consists of a short striped jacket and wide swelling breeches or drawers, which go down to the ankles, if not to the toes. On the ground behind this figure are objects like a glove and a one-handled quaich turned upside down.

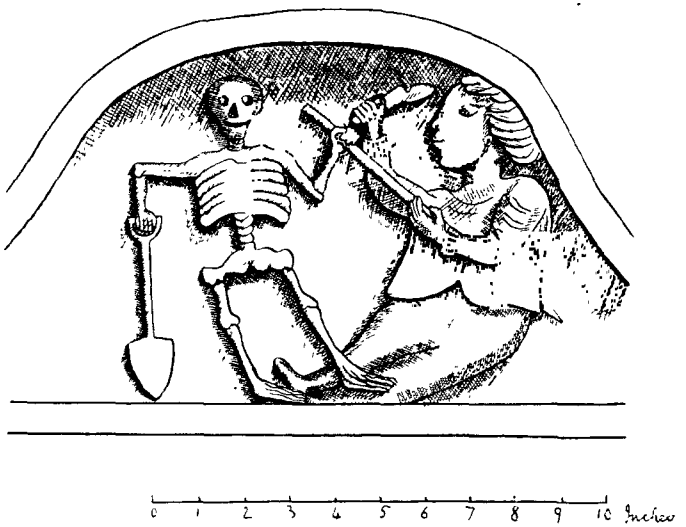


Fig. 4. Enlarged pediment of fig. 3.

On the reverse (fig. 5), under the arch of the pediment, within a deep recess, flanked by fluted pilasters, a cherub hovers over a recumbent figure in a dressing-gown-like shroud with empty sleeves, and a rimmed cloth or other covering to the face (enlarged view, fig. 6). In the middle of the stone below is a hideous half-human half-animal face, with protruded tongue and conventional hair and beard (enlarged view, fig. 7), flanked by "W. T." and "1759," and lower down by apparently round-headed fluted pilasters, upon which are displayed a mason's tools,

The flanks of the stone are 3 inches wide, and above the capital on either side is a well-designed human head, with an unusually pleasing countenance (fig. 8). The elaborately dressed hair is well seen in the front views of the stone (figs. 3 and 5).

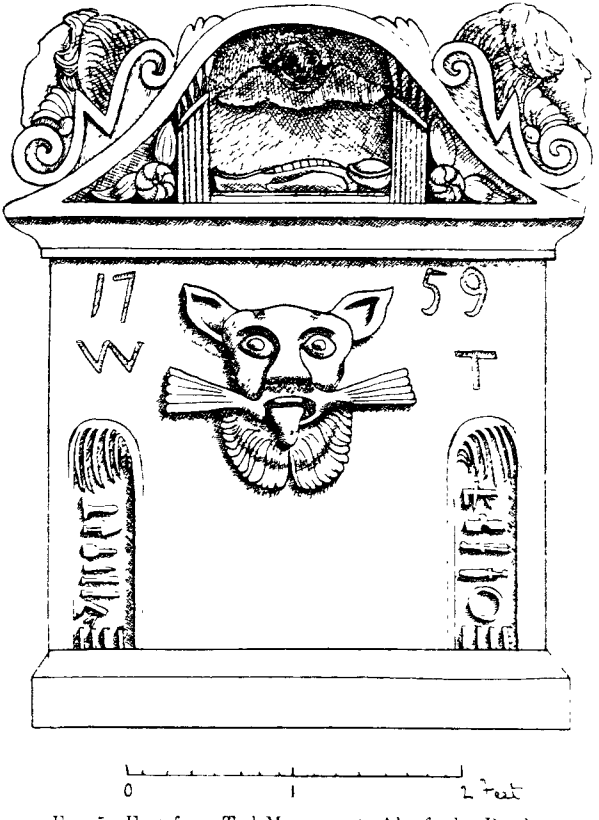


Fig. 5. East face, Tod Monument, Aberfoyle, Perth.

2. *Buchlyvie.*—The extremely plain church, originally the meeting-house of the Antiburgher Seceders, and built in 1751, but now attached to the U.F. community, stands in the only burying-ground of the *quoad sacra* parish, the church of which is at the other end of the village.

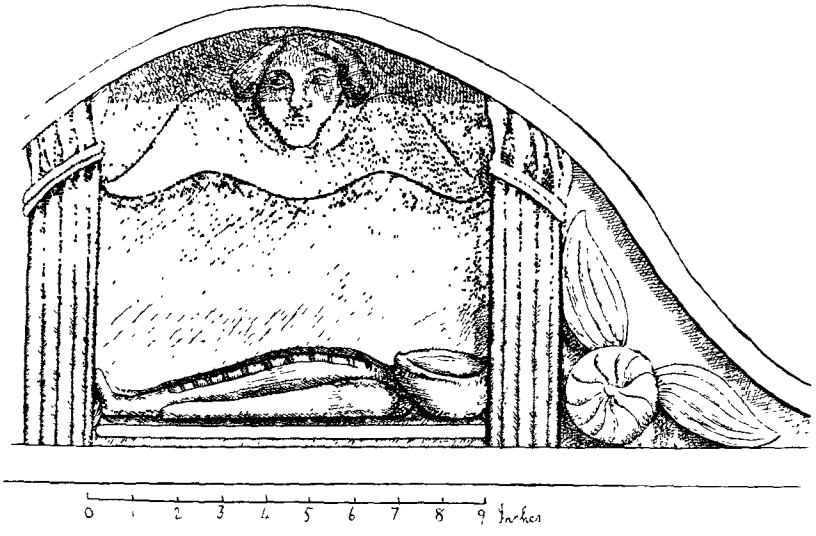


Fig. 6. Enlarged pediment of fig. 5.



Fig. 7. Enlarged grotesque Head from fig. 3.

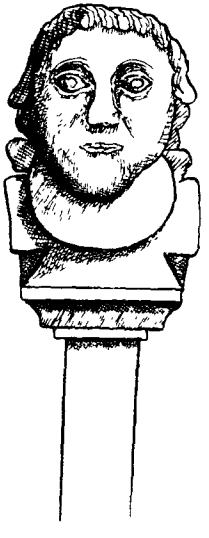


Fig. 8. From Tod Monument, Aberfoyle.

Judging from some of the dates on the tombstones, the churchyard must have been in existence before the church. Slabs are numerous, but many of them are so covered with moss that it would take many days to uncover and investigate them, and I do not think the reward would be great, as the generally smooth surface of the moss shows that very few have carvings, in relief at all events. Many also that are free from moss seem never to have had either inscription or decoration. A

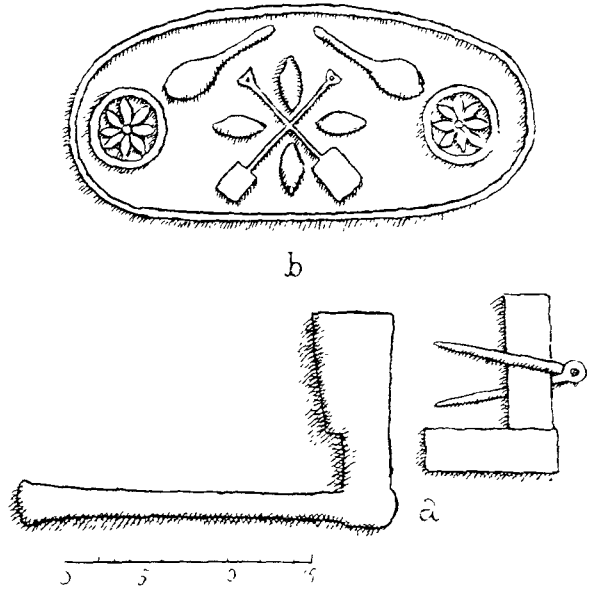


Fig. 9. Buchlyvie, Stirling.

very few have the ordinary skull and crossbones or tools. Of the latter I give a well-carved example in relief of a full-sized axe, compass, and square (fig. 9, *a*), dated 1704. At the top of another slab, within an oval space, fielded by a plain bead, are two crossed very small-handled spades or shovels, with somewhat diamond-shaped objects in the four angles, probably batches of bread, flanked by rosettes, and with two peels or bakers' oven-shovels above (fig. 9, *b*). The date I could not make

out. The only other carving of a baker's implements I have seen in a churchyard is at Abercorn (*op. cit.*, fig. 46, *i*). Compare also those on ancient edifices at the Water of Leith village, figs. 43, 44, 45.

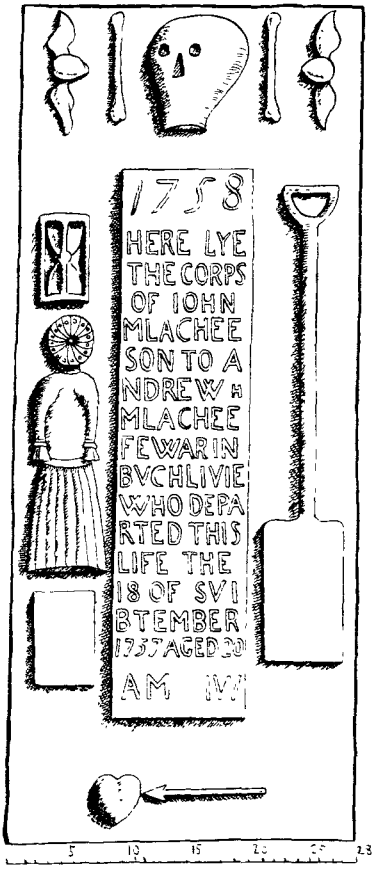


Fig. 10. Buchlyvie, Stirling.

The most interesting slab, however, is shown in fig. 10. At the top, a skull is flanked by winged heads; below the skull, and running down the centre of the slab, is a raised tablet, with an inscription to John and

Andrew MLACHEE (M'Lachie?). The tablet is flanked on one side by a full-sized spade, and on the other by a comparatively small figure resembling a stuffed costume rather than an individual. The head, instead of a face, has a circle, with sixteen lines radiating from the centre, and in each space thus formed there is a little round hole near the circumference. The costume has sleeves with plaited cuffs, a waistband, and a skirt or kilt with eight plaits, but there are neither hands nor legs. Below this is a square object, perhaps intended for a book, and at the very foot of the stone an arrow points to and almost touches a heart. All the carvings are in high relief.

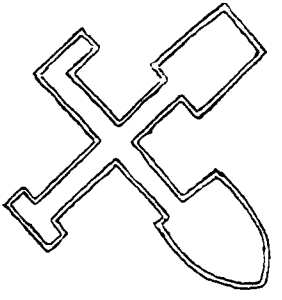


Fig. 11. Port of Menteith, Perth.

3. *Port of Menteith.*—The church is prettily situated, and the yard contains many slabs and headstones, with a few tablestones, but few seem to be of any interest. The only seventeenth century date I saw was 1676, on a slab with a marginal inscription to WILLIAM M'KENLAY, with incised skull and crossbones and crossed spades. As this is an early example of the latter I give a drawing (fig. 11).

An elaborate monument is the tablestone in memory of William Macfarlan and MARGRAT Campbell, dated 1757, restored in 1853 by John Kennedy, D.D., their grandson. The table bears merely the inscription, but the slabs supporting the two ends are carved both on the face and flanks in the following manner. The west one has on the face a richly ornamented and deeply carved shield, displaying a plough-

share, hammer, square and compass, all in high relief (fig. 12). On its north flank, also in high relief, is a smiling human face, with well-dressed hair and long "tassels" hanging down from the ears (fig. 13, *a*): on the opposite flank is a skeleton in relief, with a distorted face incised above it on the capital (fig. 13, *b*). The east support bears on the face an ordinary skull and crossbones: on the north side the upper part of a human body, swathed in a "dressing-gown" with empty sleeves, and

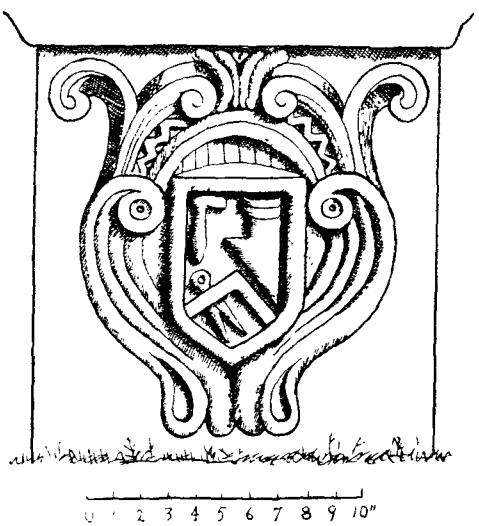


Fig. 12. On support of Tablestone, Port of Menteith, Perth.

the face covered by a rosette (fig. 14, *a*); on the south side, a hideous, sensual, leering face, with wide mouth and protruded tongue (fig. 14, *b*), evidently by the same hand that carved the more animal face on the Tod monument at Aberfoyle, fig. 7.

4, 5, 6. Following the valley of the Forth, we come to several kirkyards from which I have published examples in my former paper, *Thornhill, op. cit.*, fig. 127, *a*, *g*; *Kippen*, figs. 99 and 110; and in the angle of junction of the Forth and Teith, *Kincardine*, fig. 158. I

have nothing to add from them, and it only remains to speak of *Garguunock*.

7. *Garguunock*.—The church has a rather neat appearance, standing

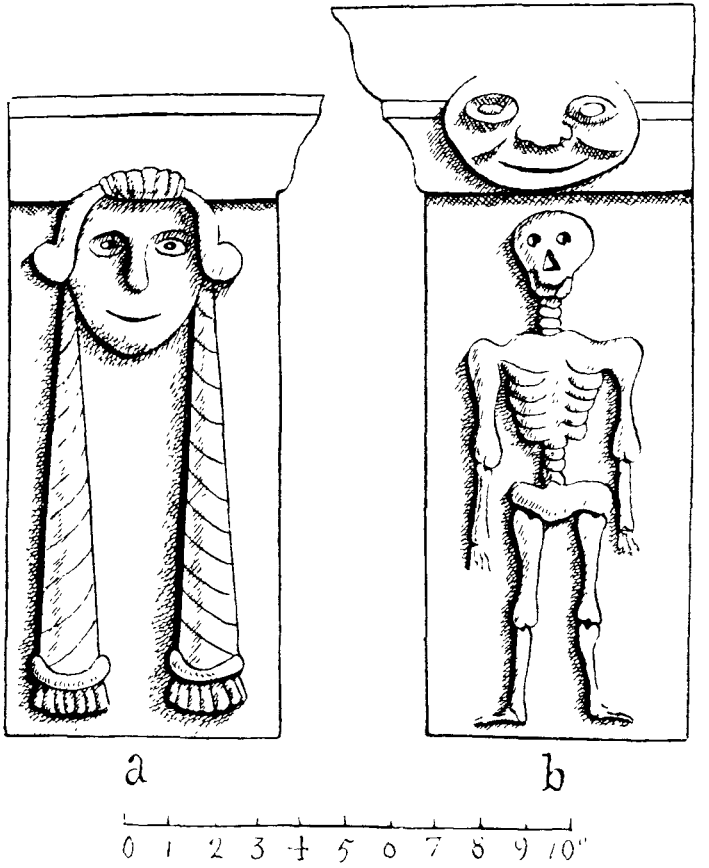


Fig. 13. On sides of support, fig. 12.

above the road, with an out-side stair somewhat redeeming its common place aspect. A stair-style to the churchyard harmonises with the scene, and saves the too common trouble in Scottish parishes of hunting

for the key of the locked gate. The churchyard slopes steeply from the west end of the church almost on to the roofs of some houses, and beyond this the village climbs a steep hill westward. The view of Highland mountains is superb, and altogether the situation is remarkable.

Many partly moss-covered slabs, apparently of the eighteenth century,

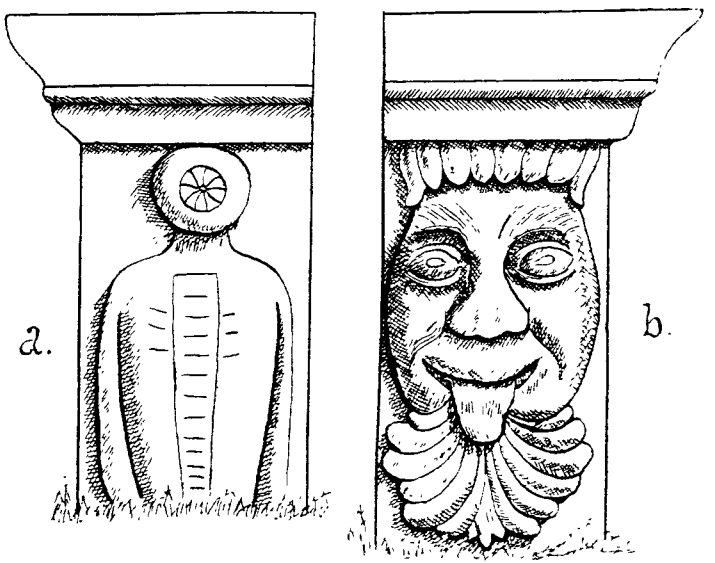


Fig. 14 On ends of east support, Tablestone, Port of Menteith.

remain in the churchyard, but I saw no seventeenth century dates. One or two examples of the skull-and-crossbones, and a square, were all the carvings I could make out, except the superior designs on two headstones now to be given.

In one, the tools of a shoeing smith are boldly carved in high relief and of natural size (fig. 15), without inscription save the date 1748 and the initials I. A. The other, apparently dedicated to a schoolmaster

(fig. 16), displays at the top two quills crossed, and flanked by the date 1736, and below them an ink-bottle with a small quill pen in it, flanked by a ruler and a star. These emblems are within a chevron arch. Beneath them, and half buried in the soil, are a skull and cross-

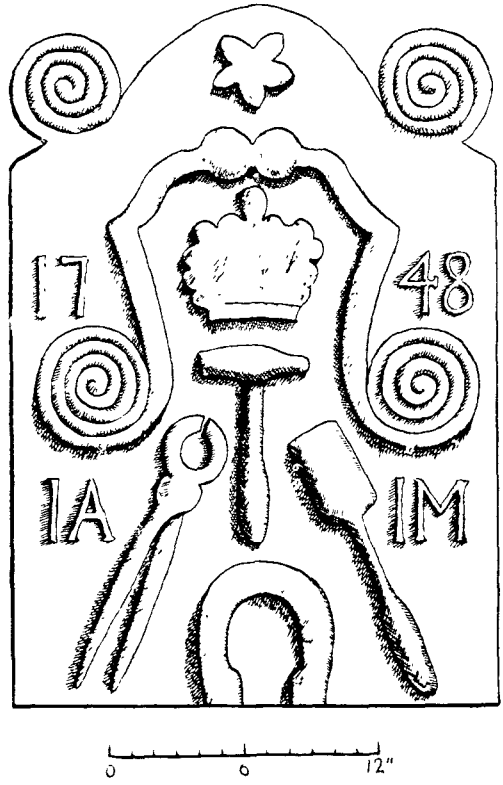


Fig. 15. Gargunnock, Stirling.

bones, flanked by a repetition of the chevron border running down near the edge of the stone. The monument is small, but the design is in good taste and well executed. I do not know of any other example in Scotland of a tombstone with the implements of a schoolmaster, but I

have seen two in the churchyard of Brixton, Isle of Wight. One, dated 1780, displays on a headstone a book, ink-bottle and quill in it, globe, two rulers, and a pair of compasses, all very nicely carved (*op. cit.*, fig. 183, *d*). The other, of later date, is a comparatively feeble production.

B. Strathendrick.

The Endrick Water has its sources in the Gargunnock Hills, and after separating these from the Fintry Hills in a southerly course of three

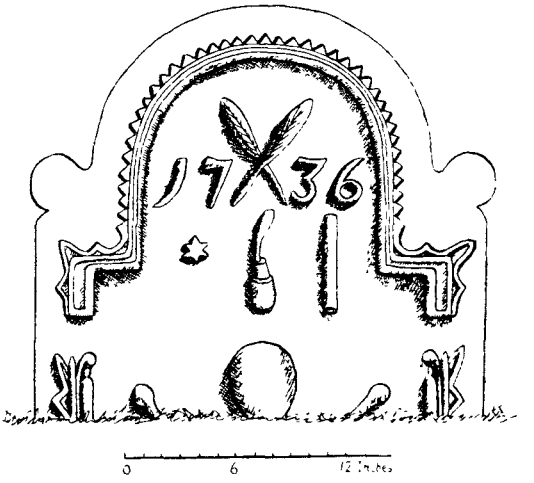


Fig. 16. Gargunnock, Stirling.

miles, bends westward between the Fintry Hills and the Campsie Fells for five miles; it then skirts the northern slopes of the latter for six miles, and making a great bend to receive the Blane Water from the south, continues its course through the wide part of the strath for another six miles, between the Kilpatrick Hills and the end of the mountains on the east side of Loch Lomond, and falls into that loch opposite Inchcailloch. The whole course measured straight on the map is about twenty-two miles, but including the numerous greater and minor curves must considerably exceed thirty miles.

In its varied course the stream for the greater part of the way passes through scenery of an Anglo-Scottish kind, combining the rich and well-wooded character of the one country with the hilly irregular nature of the other. The oak is common in the lower strath, and nowhere in Scotland have I seen it so well formed and richly clothed, although few of considerable size are to be seen. Even the villages have little of the commonplace attributes so common in Scotland. They generally run downhill in an irregular manner, amidst trees and gardens, and the cottages often have retained their thatched or red-tiled roofs, and are not inelegantly planned.

1. *Eutry.*—This parish is the uppermost on the river, and the church is beautifully situated where the wilder and bare part of the glen ends, three miles below the westward bend of the infant stream, and half a mile above the village. The churchyard contains a great many slabs, generally not much covered with moss; and although the decided majority are plain, and seem to have been always so, inscriptions, or at least initials, are more numerous than is usual in the district. Several of them are dated towards the end of the seventeenth century. On one of these, bearing on the face an incised mill-rynd, with the date 1692 below it, I could read on the nearly effaced marginal inscription the name (CU)NNINGHAM, and LAST WEEKS OF MARCH. On the lower part of the face these lines are quite distinct:—

O . PAINTED . PI'E . OF .
LIVING . CLAY . O BE .
NOT . PROUD . OF THY
SHORT . DAY.

The slab to Elizabeth Robinson, "SPOWS" to John Cowan (fig. 17), with a marginal incised inscription, effaced at the end, has a skull and crossbones at the top in a sunk panel, and the date 1693 below.

Probably at least as old is the undated slab (fig. 18), with a well incised marginal inscription to John Risk and Agnes Brown, which goes on to state that this is also the place appointed for Hugh Risk, Elizabeth Cunningham, and their children—a kind of announcement I have not

noticed elsewhere. The face of the stone is carved with an unusually interesting design. It is divided into three panels, the upper and lower of which are very simply ornamented by bars, so placed that if prolonged

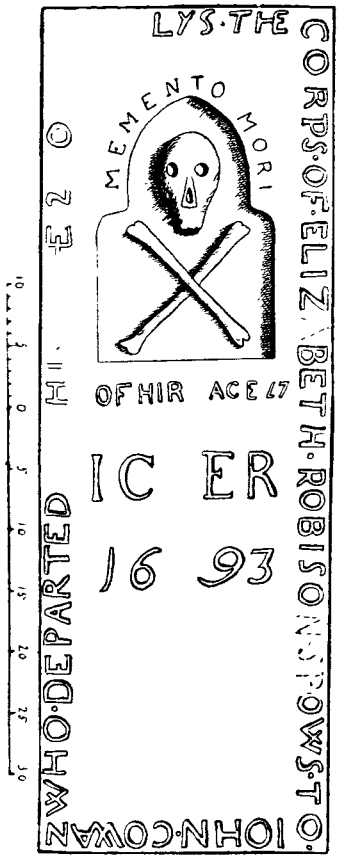


Fig. 17. Fintry, Stirling.



Fig. 18. Fintry, Stirling.

through the middle panel they would nearly form an elongated St Andrew's cross. The middle panel contains in high relief the well-posed and dignified figure in profile of a man reading a book. He is clothed in a

short-skirted coat, and the lower limbs are omitted. Opposite the skirt is a large hourglass, and beneath both is a winged head, set rather awry, and with wings of unequal size. This cherub hovers over a

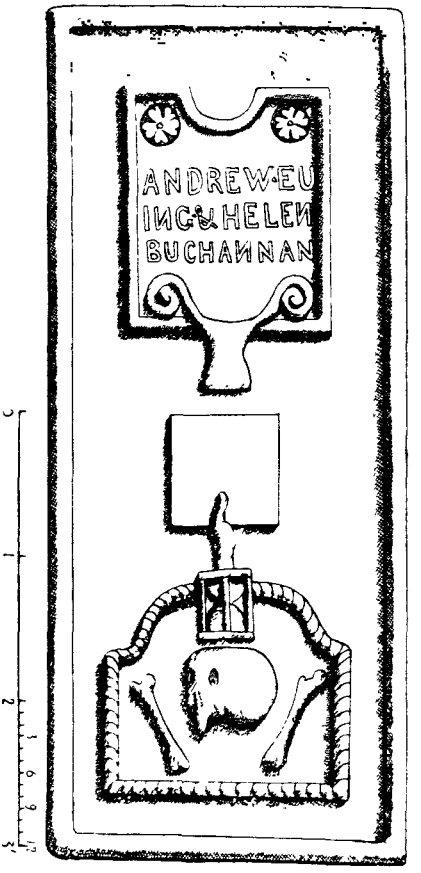


Fig. 19. Fintry, Stirling

diminutive dead body wrapped in its shroud, below which "resurgamus" is incised in a current hand.

Of later date, 1751, is a slab, broken in two, of a rather unique kind,

as the inscription is confined simply to the names, presumably of a husband and wife. They are beautifully carved in large capitals within a plain bead border, supported by what resembles a double-handed urn (fig. 19). Below is a hand holding an open book.

There are also several tablestones: two, dated 1720 and 1722, with ordinary skull-and-bone emblems.

The only headstone of interest is inscribed, "Here lies Joan Joack

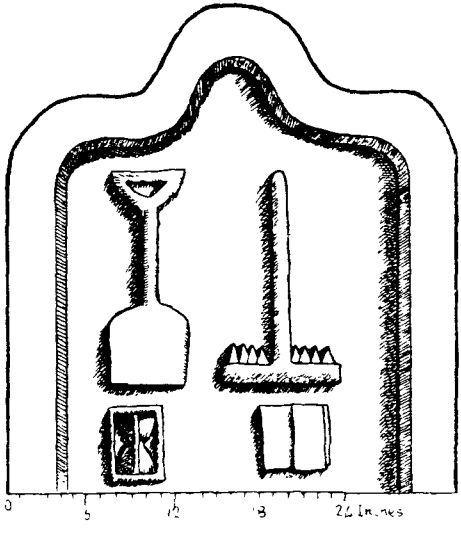


Fig. 20. Fintry, Stirling.

spouse to John Bour gardiner at Culreath, 1764," and bears in high relief on the back his spade and rake, an hourglass, and a book (fig. 20).

Balfron.—The church is quite detached from the main part of the village, which runs downhill southwards towards the Endrick, and is invisible from it. The approach to the kirkyard is through a little irregular square of neat houses and fine trees, with a drinking-trough in the middle, taking the place, perhaps, of the village cross. The antiquity of the square is vouched for by a ruined oak, whose stem, girdled by a strong iron band, is 14 feet 6 inches in girth, 5 feet above ground.

Beyond the oak, the tower of the church shows between two large ash trees, one nearly 14 feet in girth, guarding the gate of the churchyard, the fabric of the tower being of a rather neat design, and built of stone of a delicate red colour. The whole scene is of an unusually pleasing character.

Among the very numerous slabs, few show any signs of having had either inscriptions or emblems, but many are moss-covered. The oldest date I saw was 1668, on a slab with an illegible marginal inscription. A few of the many that were clean bore ordinary "skull and crossbones," but I noticed none with tools. Probably of early date is the slab, $4\frac{1}{2}$ feet long, with nothing on it but an incised cross-hilted sword, with a blade 28 inches long, and 3 wide six inches below the hilt, thence tapering to a point (fig. 21, *a*). It looks like a really serviceable weapon, unlike the only other sword I have seen on a Lowland tombstone (*op. cit.*, fig. 182), which seems rather of a fanciful character.

Also of some age appear to be two slabs bearing the same animal head of a rather nondescript kind, probably heraldic. In one of them (fig. 21, *b*) a single head stands under a skull and crossbones. In the other, one head at the top is flanked by a feeble ornamentation of radiating curved lines (fig. 21, *c*), and, close below, three are included in a sunk panel, shaped like a heraldic shield. All four are on a square surface raised 2 or 3 inches above the slab. A row of five or six ear-like objects project from the head backwards in each case.

Headstones were numerous. The oldest date I saw was 1707 on a small one, rough-hewn behind, and bearing in front in high relief a skull and crossbones, with a winged head above and an hourglass at one side, but no inscription.

Among the numerous nineteenth century headstones, two may be singled out as showing some originality. One (fig. 21, *d*) bears two bayonets crossed, and is inscribed, "To the memory of Walter Buchan of the 42nd Regiment who fell in the memorable battle of Waterloo on the 18th of June 1815, aged 21 years. Dulce et decorum est pro patria mori."

The other (fig. 21, *e*), of date 1827, has on the back two serpents facing an apple (?) and intertwined below, but with the tails free. They are carved in very high relief and remarkably well designed.

Killearn.—The site is perhaps the most beautiful of the many finely situated churchyards of the district. To the south the ground falls

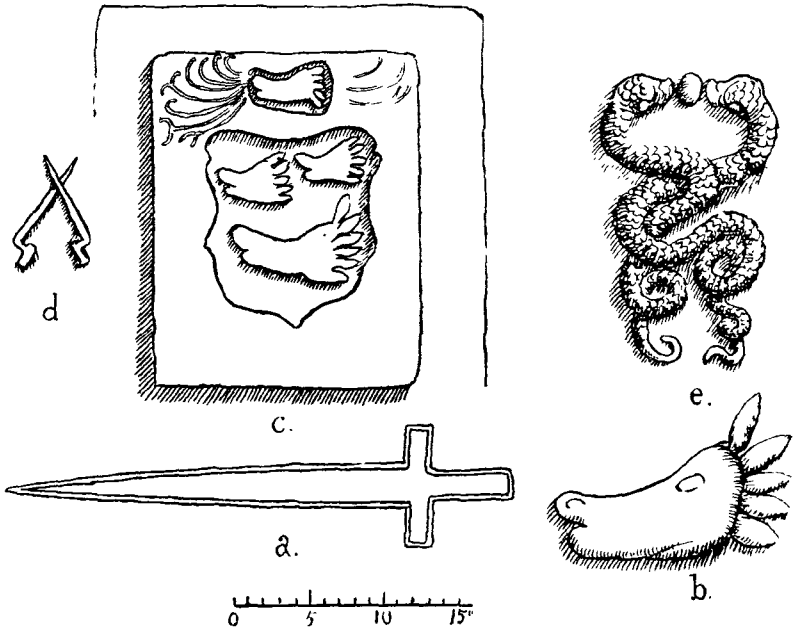


Fig. 21. Balfron, Stirling.

from the burying-ground by a gentle slope, with an intervening strip of grass bounded by nothing else than a light fence of the crimson rambler rose, and then ascends gently to the foot of the steep rise of the Fintry Hills about a mile off, which, seen from here, have a rugged look and a fine sky-line. These slopes, as well as the decline to the west, are diversified with scattered oaks, well-grown and handsome. The ruined church does not detract from the beauty of the scene, as it is completely

covered with ivy. The village, almost hidden here, has a charming irregularity, and contains many neat cottages with fine trees and flowers. The handsome memorial church to Mr Orr Ewing stands apart, also in a fine situation, close to the obelisk in memory of George Buchanan.

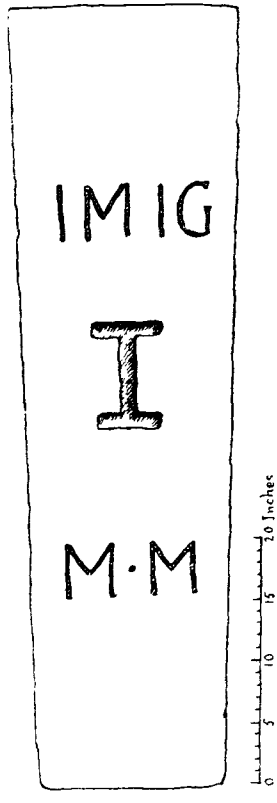


Fig. 22 Killearn, Stirling.

The churchyard contains very many slabs, almost free from moss. I read ten seventeenth century dates, from 1624 to 1694, and many of the eighteenth century, but the only carvings I could see were a couple of feebly executed "skull and cross-bones." With the exception of initials, which are common, there are very few inscriptions. One slab (fig. 22) is of the elegant early form, narrowing to the lower end, and has in the centre apparently a mill-rynd, deeply incised.

Strathblane.—As the Blane falls into the Endrick west of Killearn, and the parish of Strathblane includes the whole strath of the same name, this seems the proper place to describe its kirkyard. It is on a high wind-swept spot, at the very top of the pass leading from Strathblane to the south country, and yet it is adorned by fairly good trees, and the church, under the fostering care of the Edmonstounes of Duntreath, greatly surpasses in elegance the mass of Scottish parish churches.

The tombstones enjoy the unique privilege of having been exhaustively described, catalogued, and illustrated by Mr John Guthrie Smith,[1] and owing to his indefatigable exertions they are now almost free from

[1] *Parish of Strathblane*, J. Guthrie Smith, F.S.A. Scot., 1886.

moss. Mr Guthrie Smith claims for one of them the very ancient date of 1480, and states that this is authentic, although the figures are new, "having been renewed a few years ago, as the old ones were then nearly obliterated." I cannot help thinking that this is a mistake, however, as so old a date is quite unprecedented in Scottish churchyards, and those even of the subsequent century are so rare as to make it doubtful whether they were not originally within the churches. The next earliest in his list, also, is 1626, or a century and a half later.

It is interesting to note the number and kind of tombstones as recorded by Mr Guthrie Smith, of which I have made the following analysis:—

Slabs.

	17th Century.	18th Century.	Carved.	
With dates and initials . . .	12	25	Coat of arms . .	2
With dates and names . . .	3	8	Crown and hammer	1
With dates and marginal inscriptions	3	1	Bell, coffin, skull, crossbones, and cross-spades .	1
With dates and face inscriptions .	5	9	Coffin only . .	1
	33	43		5

Headstones.

	0	7	Crown and hammer	1
Undated inscribed or blank slabs .	43			

The much later origin of the headstones, and their comparatively small number even in the eighteenth century, are in accordance with what I have observed in the other churchyards of the district, and, I think, is also characteristic of the country generally.

Referring the reader to Mr Guthrie Smith's work for illustrations of several other carved tombstones, I give in fig. 23 a representation of the crown, ring, and hammer-in-hand on the slab dated 1774 to James Leitch and Margat Lawson. The ring I have not seen before in the many crowned-hammer monuments met with, neither do I know its

significance. A crown and hammer, Mr Guthrie states, are the insignia of the Glasgow Incorporation of Hammermen.

I also give (fig. 24) a copy, reduced from my rubbings, of the curious inscription in sloping italics upon both faces and one side of a headstone which Mr Guthrie Smith gives in ordinary type in his volume. The last line of the inscription on the west face, which is now concealed by the turf, reads

No . more . to . taste . of . death

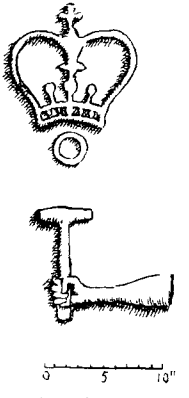


Fig. 23. Strathblane, Stirling.

Also hidden by the turf is the conclusion of the side inscription—

to . who
suvi
vs no .
pity .
(shows on spares ')

The breaking up of the words in these short lines seems almost wantonly absurd.

Drymen

The village, like others in the district, straggles picturesquely down-hill, in a rich agricultural country adorned with many fine trees. The unpretentious kirk is at the foot of the village, though not of the slope, and the yard has good trees about it, and two or three neat thatched

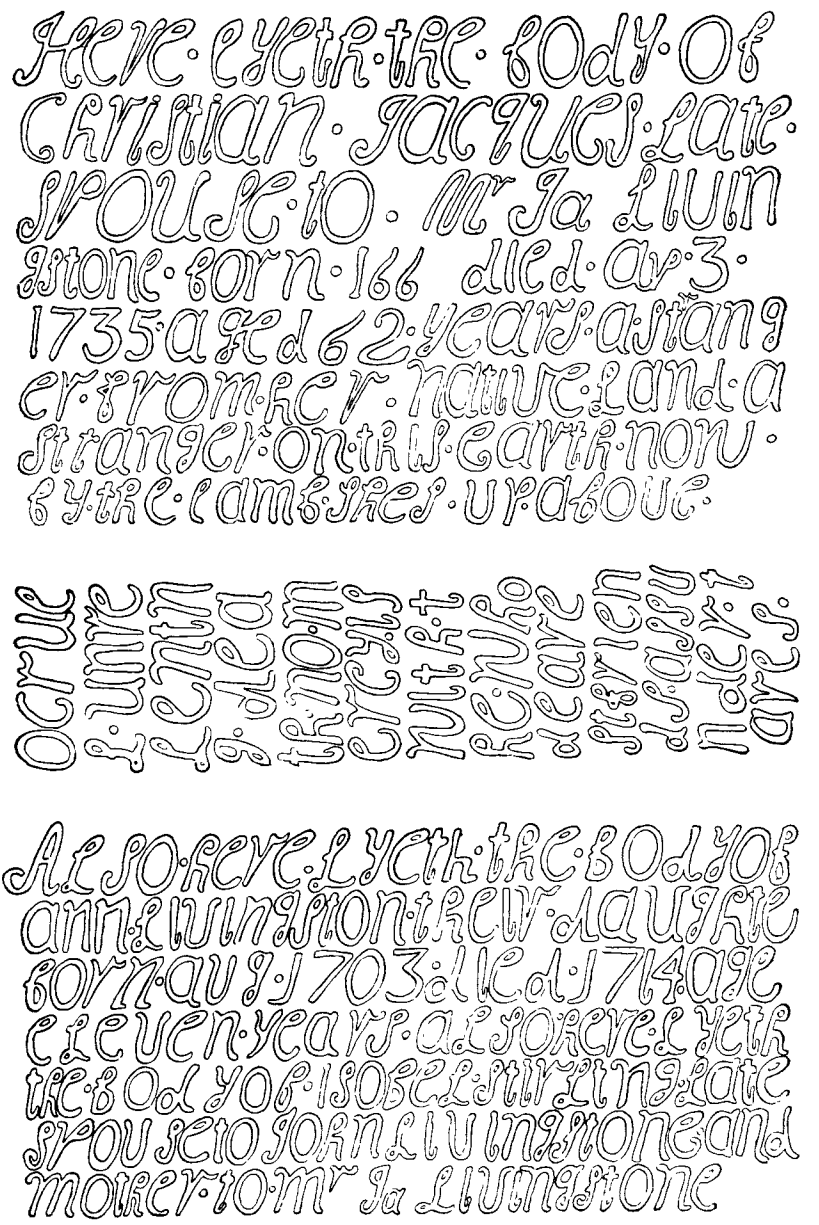


Fig. 24. Strathblane, Stirling.

cottages in front. It contains numerous slabs, mostly moss-covered, and the only carving I could see, incised at the foot of a slab on which nothing else was to be made out, looked like a strange combination

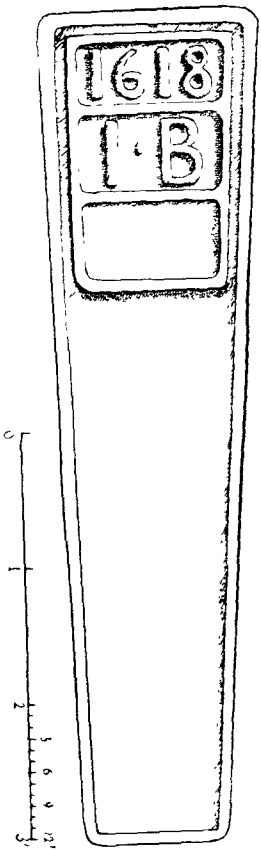


Fig. 25. Drymen, Stirling.

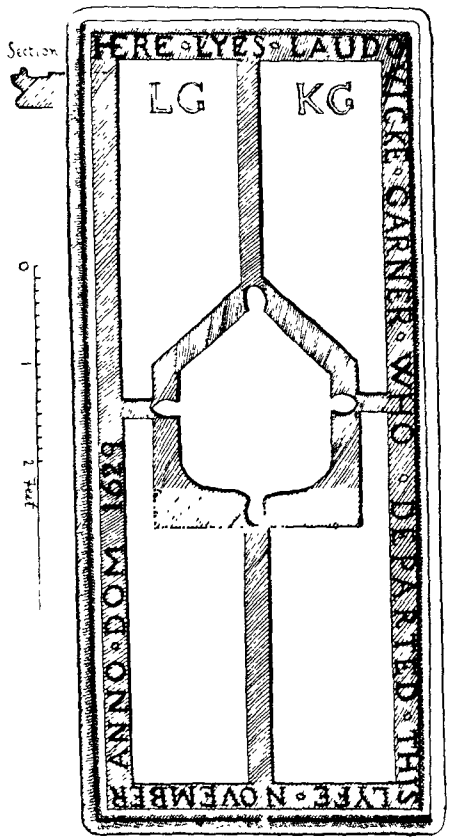


Fig. 26. Kilmaronock, Stirling.

of the cherub and skull symbols. The skull has cherub wings (?) below it, and projecting upwards from them the upper part of crossbones, which are not prolonged downwards.

An elegant slab, nearly 6 feet long, 18 inches wide at the top, and 12 inches at the bottom (fig. 25), has at the upper end a panel divided by raised lines into three parts. In the first is the date 1618, in the middle one I. B., and the lower one is blank. Letters and figures are in high relief. The next oldest date I saw was 1770. There are a good many headstones and a few tablestones, all apparently of a late period. One of the former is remarkable for having the square and compasses at so late a date as 1867.

Kilmaronock.—The plain kirk stands on a good site amidst fine though not ancient trees. I should think a couple of hundred slabs at least

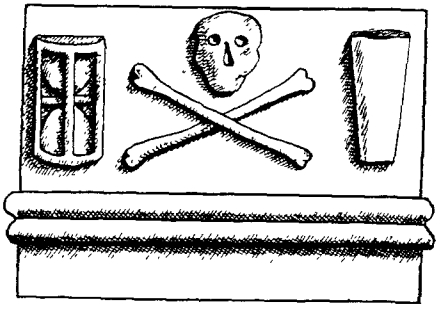


Fig. 27. Kilmaronock, Stirling.

cover the ground, moss-covered and not, scarcely any of which show signs of carving, and but a few of lettering. A notable exception is the fine stone to Ludovicke Garner (fig. 26), of date 1629. An unusual feature is the groove in which the marginal inscription is incised, a plan which may have secured its fine state of preservation. The conspicuous shield in the centre, where the sunk arms of a cross meet, does not seem ever to have borne anything.

There are a considerable number of comparatively modern tablestones and very many headstones, a few of which have the unusual length compared with height shown in fig. 27, which often bear inscriptions on

the top as well as the face. This is the only one with any carving, and is perhaps the oldest.

The following inscription on a slab is incised in italics, the capitals at the head of some of the lines being well formed and designed. I had not time to take a rubbing of it. The date probably stands for June 11, (17)77.

Go home dear Freen
des and shed no tear
We must lie here till
Christ apear and at
his coming we hop
To have a joyful
Rising from the
Grave June 1177

Buchanan.—The church is seen and approached through an avenue of pine-trees, which increases its resemblance to a rather old-fashioned country-house. Many are the slabs, but it would require much hunting to discover what designs may be concealed under the thick coating of moss lying on nearly all of them. I could see only a few skulls and crossbones and a very little lettering.

Part II.

Miscellaneous Monuments.

Adam and Eve Stones.

In my former paper I described and illustrated twelve examples of this class of monument, which made its appearance in the kirkyards about the middle of the eighteenth century, and vanished before the end of it. They were met with in the counties of Kincardine, Forfar, Perth, Stirling, Lanark, West-Lothian, Roxburgh, and Dumfries, showing that they were distributed pretty widely over the Lowlands. Although no two were alike, the treatment of the subject was generally much the same. Adam and Eve, facing the spectator, stood

on opposite sides of a tree, loaded with enormous apples, and Eve was in the act either of receiving the apple from the serpent in the tree, or of handing it to Adam. Marked exceptions occurred at Melrose and Logiepert, where Eve seems to be still resisting the tempter.

I am now able to place on record nine additional examples: one from Birnam, Perth, one from Kells, Galloway, and no less than seven from Ayrshire.

Birnam, Perthshire.—In this instance, which was made known to me by my daughter, Miss Maud Cassels Christison, who took a photograph of it (fig. 28), the subject is treated in a totally different manner from those formerly described. Above a skull, crossbones, and hourglass, not shown in the view, is a "Memento Mori" ribbon, above the middle of which Eve, clothed in an apron and a kind of mantle, is sitting in the background under a tree, and points to Adam, who, also wearing an apron, stands forward, with one hand on his stomach and the other stretched towards the tree. Between them, and in front of Eve, the serpent crawls along the ground towards the tree. The attitudes suggest that Eve is asking the serpent to fetch an apple for Adam, who is quite ready to receive it.

A straight scrollwork separates this scene from another, more decayed, in which the Annunciation is represented. On the left, an angel in flowing robes is descending, holding a lily in one hand. On the other side of the lily the Virgin kneels in an attitude of adoration. Lilies and roses fill blank spaces on the stone. At the very top are a weaver's frame and shuttle. A bead border, decorated with circles, incloses the whole. This stone, dedicated to John Campbell, Trefuch, is the only example I know of an Annunciation scene, among the kirkyard monuments. Its date is probably about the middle of the eighteenth century. When newly carved it must have had a very handsome appearance, in spite of the rather grotesque treatment of Adam and Eve.

My knowledge of the existence of the example at *Kells* in Galloway,

and of six of the seven in Ayrshire,—at *Riccarton* (two), and one each at *St Quivox*, *Tarbolton*, *Dunlop*, and *Craigie*,—is due to the Rev. David Landsborough, LL.D., Kilmarnock, to whom I am also indebted for a



Fig. 28. Bunam, Perth.

description and drawings of several of them, reproduced from an account he published under the title of "The Church in Ayrshire in the Olden Time," in *The Kilmarnock Standard*. The photograph of the seventh, at *Colmonell*, was taken by Mr John Aitken, Arden Lea, Falkirk.

Riccarton. No. 1.—On the front of the stone Dr Landsborough could see only faint remains of the ordinary "Adam and Eve" type, but the lower part of the stone on the other side had been well preserved, and on it he found another representation of the subject, in which "a new feature had been introduced. The tempter is not the serpent,

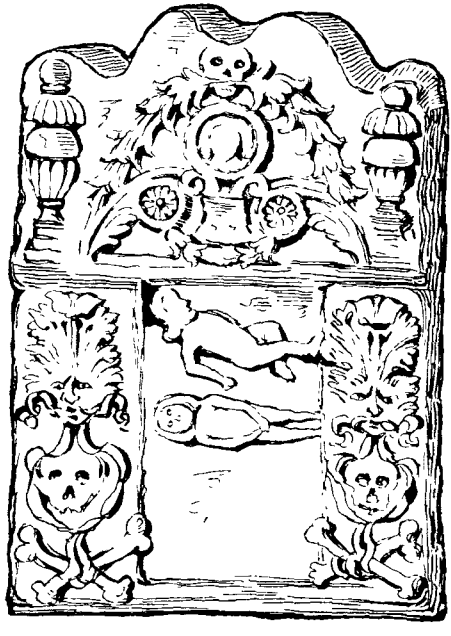


Fig. 29. Riccarton, Ayrshire.

but the woman. Adam makes a vigorous resistance. He is represented fleeing from her. But his arm is extended backwards towards her, while its palm, turned against her, says emphatically, 'Begone! tempt me not!' (fig. 29). Eve stands firmly with clasped hands, as if piqued at his refusal, but resolved to conquer." The design is quite peculiar in one respect: the figures, instead of standing with their heads towards the top of the stone, are placed horizontally.

Riccarton. No. 2.—Adam and Eve, robust figures, stand on opposite sides of a little tree, which has a very small head (fig. 30). No details of leaves or apples are visible, neither is there any sign of a serpent. A scroll, probably for an inscription, surmounts the scene, and above the whole is an angel or cherub, much erased.

Craigie.—The stone that once stood here was removed in 1832 to the grounds of a member of the family to whom it belonged, where it now

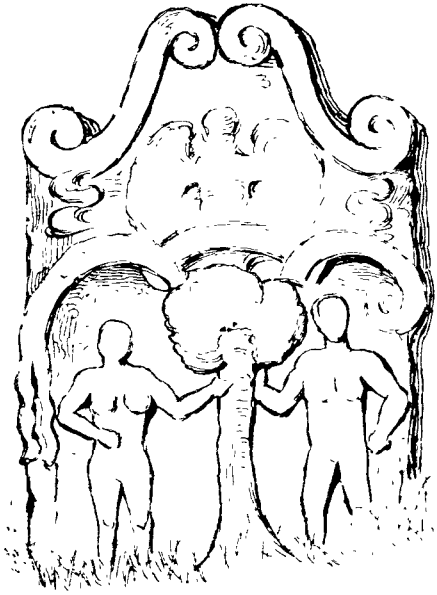


Fig. 30. Riccarton, Ayrshire

is. On one side it is much effaced, but the earliest date on the inscription is 1692, and the base is adorned by a plough, with ploughman and ploughboy, and either three or four horses. In the centre of the reverse is "the Tree of Knowledge, of good size, with well-developed branches, abundant foliage, and much fruit. The figure of Adam stands on the right side of the trunk and that of Eve on the left, both having a hand on the tree. Around the trunk a serpent is coiled, its head appearing

among the lower branches." Under the tree and above each figure is a cherub head with one wing, and above the tree hovers the usual double-winged cherub head (fig. 31).

Tarbolton.—This stone "gives only the figures without accompaniments." When Dr Landsborough asked the gravedigger if there were

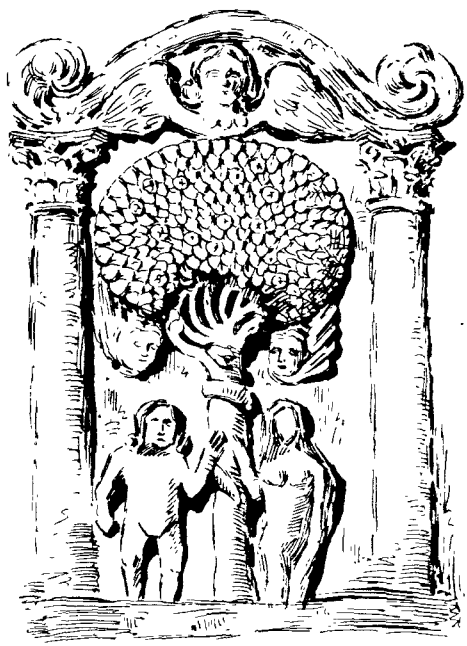


Fig. 31. Craigie, Ayrshire.

any Adam and Eve monuments in the kirkyard, he gravely replied, "Na, na; we've nane sae auld as that here!"

St Quivox.—Here the tree with its fruit is depicted, with the inscription "In the day thou eatest of it thou shalt surely die." Above is the shadowy outline of another tree, which Mr Wilson, the parish clergyman, took to be "the Tree of Life, on which the hapless pair are turning their backs as they go forth from the garden hand in hand."

Dunlop.—Of this stone Dr Landsborough had no information.

Colmonell.—Mr Aitken's photograph, fig. 32, shows very well the groups on this remarkable stone. As interpreted by him, the upper subject "represents the body as a skeleton raised up for judgment. The angel of the resurrection, blowing a trumpet and holding the open book of judgment, stands on one side. The hourglass between the



Fig. 32. Colmonell, Ayr.

angel and the skeleton would probably originally show that the sands had run out, but it is too indistinct now. On the other side stands an angel holding a balance." The middle subject represents the temptation in an unusual way. A monstrous fat serpent trailing on the ground offers the apple in its mouth to a bold-looking robust Eve, who takes it with one hand while grasping with the other the hand of a poorly developed and reluctant Adam, whose abject terror seems to

cause his limbs to give way under him. There is no tree. The date is 1758.

The lower subject represents a man ploughing with a team of four animals, probably intended for horses, though in appearance and comparative size they are more like sheep. An assistant wields an enormous whip. Mr Aitken suggests that this subject typifies the results of the Fall—"In the sweat of thy face shalt thou eat bread."

In *Colmonell* there is another stone of more difficult interpretation. Mr Aitken's photograph, fig. 33, shows a winged and dignified figure in



Fig. 33. Colmonell, Ayr.

the centre, clothed in a wide-sleeved mantle flowing to the ground, and holding in front an hourglass on its side. On either side of the central deity or angel kneels a small nude human figure. These figures seem to be holding on to the hourglass by means of little bands attached to the ends, which they grasp with one hand, while the other is stretched behind them and holds the ribbon that ties together a bundle of bones and skulls, forming a side border to the stone. Above the figures, and at the very top of the face of the stone, two dragons with twisted but not intertwined tails lie prostrate, looking outwards, supporting on their feet the top of the aforesaid ribbons. The allusion may be to the passage

from death and time to immortality and eternity, typified by one hand grasping the emblems of mortality and the other the hourglass in repose. At the same time comes the Judgment, represented by the figures kneeling at the foot of the central figure.

Cherubs.

The cherub winged head is perhaps as common as the skull and cross-bones, of which it seems to be the antagonist. Almost invariably it



Fig. 34. Callander, Perth.

hovers at the top of the monument, as if asserting its triumph over the symbols of mortality which brood at the bottom.

Callander.—I give these two examples (figs. 34, 35), from photographs taken by my daughter, because, although comparatively recent, they are perhaps the most artistically treated of all that I have seen in Scotland. Not only is the design good on the whole, but the cherubs have a pleasant, happy expression, such as is rarely met with in Scottish examples.



Fig. 35. Callander, Perth.



Fig. 36. Gifford, East-Lothian.

Gifford, East-Lothian. — Fig. 36, from a photograph by Dr W. Cameron Sillar, shows a rather peculiar example of the cherub or angel. Usually a head, neck, and wings suffice, but here the body is given as low as the waist, and two rounded prominences on the breast can be nothing else than highly developed mammæ. This angelic

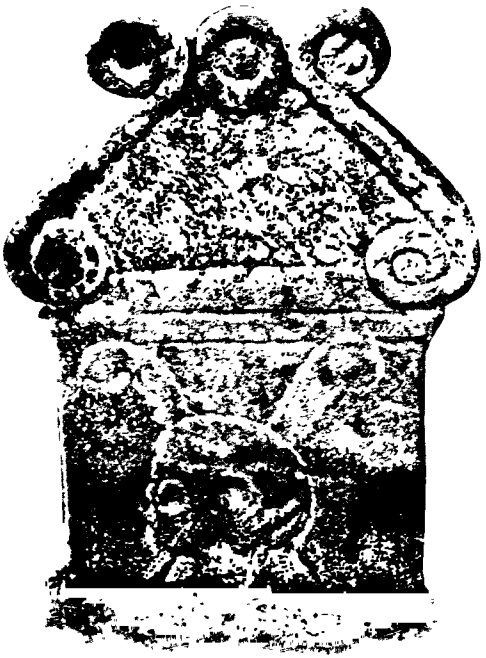


Fig. 37. Crichton, Mid-Lothian.

figure is placed as usual at the very top of the headstone, and is in a slightly recessed arched panel. The wings are small and drooping, and extend outside the recess. The face is rather dignified.

Below the pediment is the inscription, apparently undated, flanked by pilasters, bearing on their faces cross-spades and cross-bones, suspended from a ring which is fastened below the capitals of the pilasters. On

the base is a skull with a scroll inscribed "Memento Mori." The monument is well proportioned.

Skull and Crossbones.

Crichton, Mid-Lothian.—I give a representation (fig. 37, from a photograph by Mr F. C. Inglis) of this symbol at Crichton. It is incised with more faithfulness to nature than is usual. Too many otherwise tasteful monuments are disfigured by hideous caricatures of the skull, an object with which the kirkyard carvers seemed quite unable to cope,

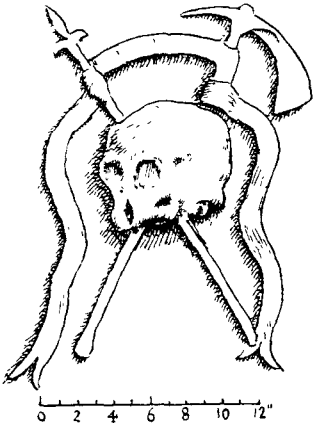


Fig. 38. Kirkliston, Mid-Lothian.

although it was easy enough to get models. Sometimes the oddest effect is produced by the artist apparently aiming at giving a front and side view in one. This example is remarkable also as standing quite alone on a handsome little headstone.

Kirkliston, Mid-Lothian.—An even better skull, from the anatomist's point of view, is carved in relief upon a slab at Kirkliston (fig. 38), in memory of a maltman. There are several dates on the inscription, but the only one that could be made out distinctly was 1686. Much to the advantage of the design, a spear and peculiar axe are substituted for the cross-bones, and a scroll is artistically wound round them.

Butcher's Implements.

Haddington, East-Lothian.—As in my previous researches I had not encountered the butcher's weapons, I concluded that there was some reluctance to display the fatal insignia of the trade. But here (fig. 39) we have knife, cleaver, and sharpening-steel—paraded, no doubt, with as much pride as the soldier feels in his sword—on a very simple stone, which has an inscription with the date 1707 on the other side.

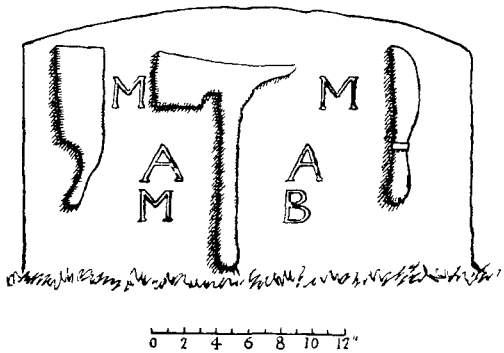


Fig. 39. Haddington, East-Lothian.

Again the cleaver and steel appear in the same kirkyard, in an elaborate design dated 1723 (fig. 40). A well-carved cherub, at the top, hovers over an hourglass, resting on its side, on a circular decorated scroll, surrounding the initials W. D. in a current hand. Below this is a horizontal scroll, behind which long bones, after flanking the circular scroll, pass obliquely inwards, behind a skull. This skull is shown in profile, looking upwards, and is almost anatomically correct.

Flanking the drooping ends of the horizontal scroll on one side, are the butcher's steel, and lower down his cleaver, grasped in a hand with an arm clothed in a plaited sleeve and ornamental cuff. The arm

proceeds from the side of a grotesque skull. On the other drooping side of the scroll are crossed spades on a comparatively small scale.

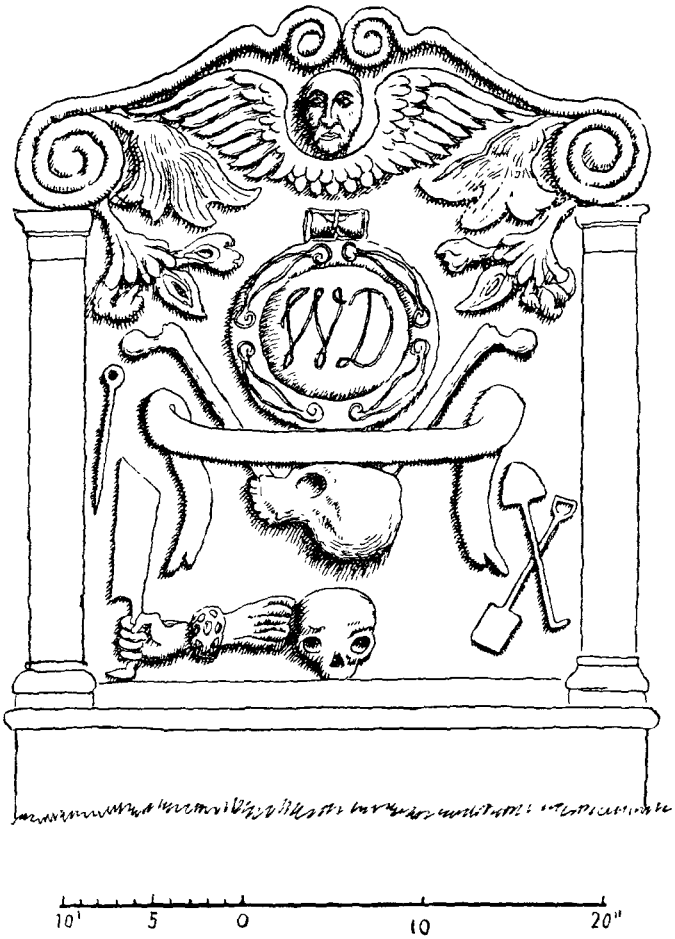


Fig. 40. Haddington, East-Lothian.

Floral decoration runs athwart the face of the stone from the volutes of the pediment, which rests on the capitals of side pilasters.

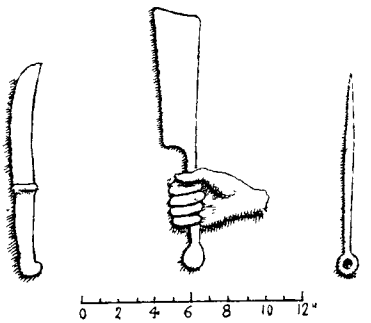


Fig. 41. Kirkliston, Mid-Lothian.

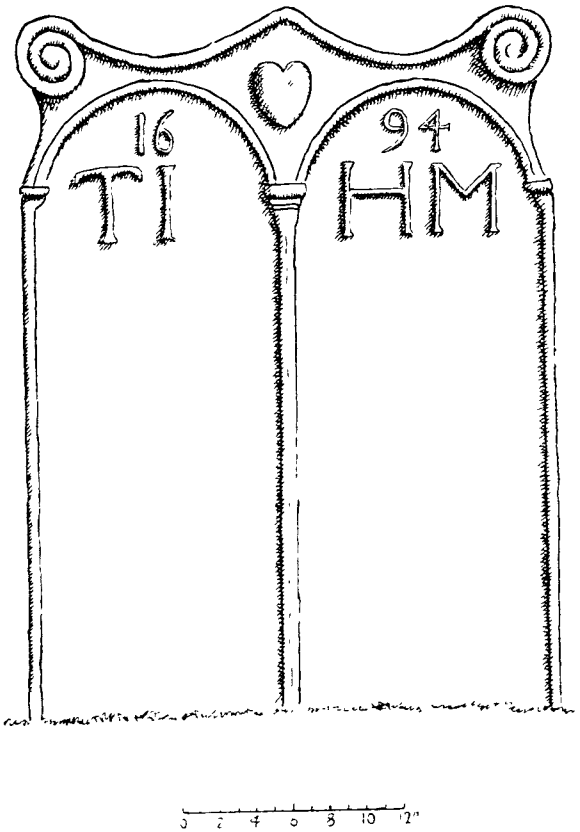


Fig. 42. Kirkliston, Mid-Lothian

Kirkliston.—On a low, broad headstone, a butcher's axe, flanked by knife and cleaver, is carved in relief, but with the exception of initials there is no inscription (fig. 41).

Here may be inserted a drawing (fig. 42) of a neatly designed stone in the same kirkyard. The front is carved into two arcades, which bear



Fig. 43. Crichton, Mid-Lothian.

nothing but initials and the date 1694. At the top, above the central pilaster, is a heart in relief.

Tailor's Implements.

Crichton, Mid-Lothian.—The tailor's scissors and goose are well carved in high relief, and of the rather early date 1678, on a headstone at Crichton, as shown in fig. 43, from a photograph by Mr F. C. Inglis.

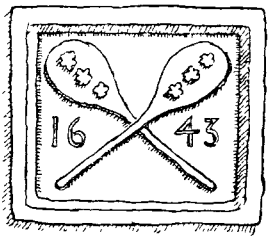
Baker's Implements.

The tombs of bakers are very rarely distinguishable in the kirkyards by the implements of the trade. Indeed, I have only met with two examples, one at Abercorn (*op. cit.*, fig. 46, *i*), in which three batches of bread are displayed upon a peel beside a roller, and the other at Buchlyvie (fig. 9), with two peels crossed, and four batches of bread in the angles of cross-spades. Considering the importance of the trade, this deficiency seems remarkable, but perhaps it may be explained partly by the infrequency of bakeries in the country villages during the seventeenth and eighteenth centuries, when oatmeal was the staple food of the people, partly by the inadaptability of the characteristic tools of the trade for tombstone decoration. In the limited space available, the most representative emblem, the peel, has to be deprived of the long handle, which is essential to its use, and becomes a "battledore." Of proper six-feet length it is to be seen in the hands of the supporters of what is merely called "The Arms of a Baker," engraved in *The Baxters Book of St Andrews*, with notes by J. H. Macadam, F.S.A. Scot. Reduced to a "battledore," we have it in fig. 9. But two other examples, although not on tombstones, may be given here.

A part of the old North Road from Edinburgh still remains, descending the steep bank of the Water of Leith from the corner of the Dean Bridge. It is very narrow, and at the foot takes a sharp and dangerous turn, which lands it at once on the one-arched bridge that spans the stream. At this corner three seventeenth century buildings remain. One at the outside of the turn is a picturesque little dwelling with a circular tower staircase. Nearly opposite is a large structure, which rises direct from the bed of the stream, with its gable abutting on the bridge, and accommodates itself to the course of the river by taking a bend about half way along its length. There are five storeys, two of them below the level of the bridge, with small square windows, and the building originally was probably a mill. It is now in use as a

brewery. The gable rises some 30 feet above the bridge, and is almost in line with it, but partly detached towards the river. In this detached part, and therefore now inaccessible, is a built-up doorway, with an incised inscription, thinly cut (fig. 44).

A little above this is a tablet with two crossed "battledore" peels in relief, each bearing three pentagonal or hexagonal objects. In the side angles where they meet is incised the date 1643.



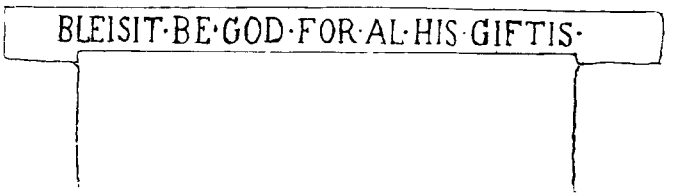


Fig. 44. Water of Leith Village, Edinburgh.

The other example is at the foot of the hill, on the opposite side of the street, on the third building. This fine old structure is 100 feet long and 30 feet wide, and with its high, narrow, crow-feet gables, its two square staircases projecting from the front, and its well-maintained sense of proportion, is quite handsome, although perfectly plain, with the exception of the now built-up entrance to the lower staircase (fig. 45). The two staircases are not on the same level, in consequence of the building being constructed alongside the descending roadway.

On the frieze of the doorway, in bold incised capitals, is the main inscription (fig. 45).

In a square panel above the frieze, a circular wreath (enlarged view, fig. 46), decorated with ears of corn, which spring from a grotesque sun

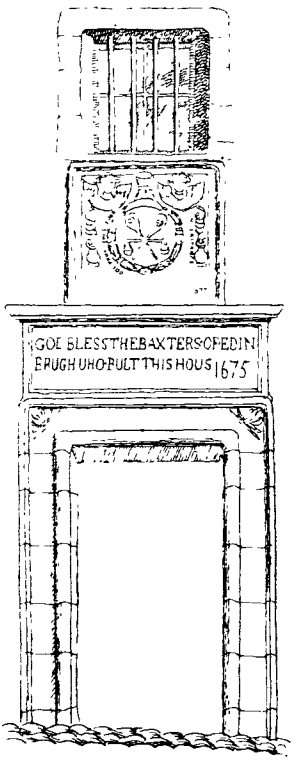


Fig. 45. Water of Leith Village, Edinburgh.

below and from a crescent moon above, and with a sheaf of corn standing on the top, surrounds the crossed peels, one of which bears an object shaped like a Greek cross, and the other something nondescript, probably from decay. A balance is suspended from where the peels cross. Flanking the sheaf are cherubs, from whose wings a coiled

ornament ending in a "caldron" runs down the side of the panel. Surrounding the wreath on one side, and running straight down beside the coil on the other, is a second inscription, in very small capitals.

At the foot of the panel there has been a third inscription of several

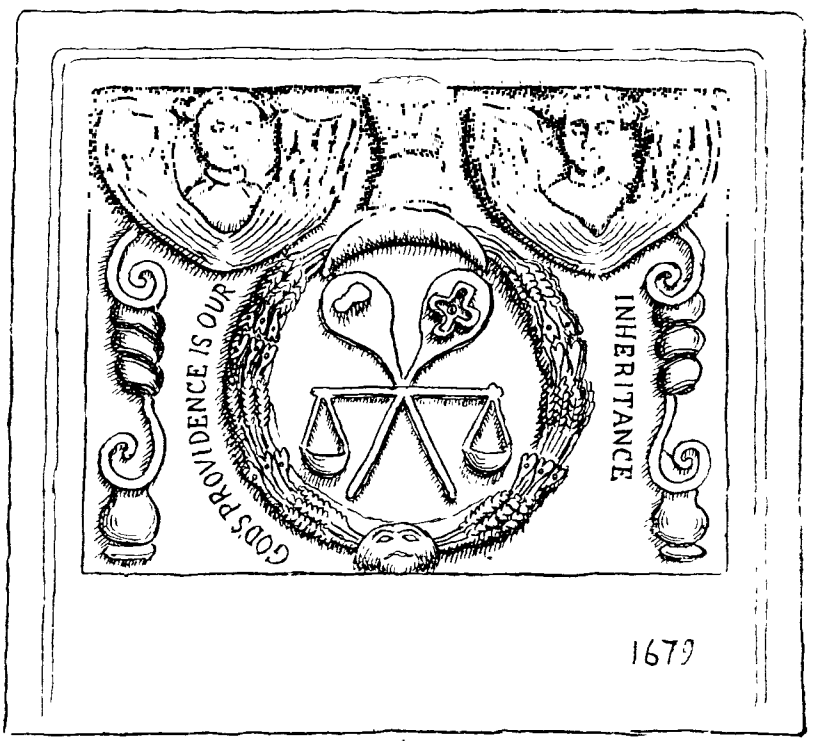


Fig. 46. Water of Leith Village, Edinburgh.

lines, and in still smaller letters, which looks as if it had been purposely effaced. Only two or three letters remain, with the date 1679.

In *Old and New Edinburgh* it is stated that this building was the tolbooth, "wherein the bailies of this once sequestered village were wont to incarcerate culprits." It is possible, as in the case of St Giles'

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Church itself, that a part of the building may have been used for such a purpose, but it is far too large to have been the tolbooth of so small a place as the Water of Leith village, and the inscriptions do not support such a destination. It seems to be in good repair, and is now used as a dwelling. Originally it was probably a warehouse.

Domestic Animals.

The village sculptor proved to be, if possible, even less capable of struggling with the forms of animal life than with the human face or figure, so that in some cases the species of animals that he intended to represent on the tombstones cannot be confidently determined. This is particularly the case in some ploughing scenes, in which the draught animals in size and shape resemble sheep, and cannot be identified as being intended either for horses or plough-oxen. Hence this branch of my subject cannot be treated under a strict system of classification, although it is capable of division under the two heads of "Animals at Rest" and "Animals at Work." It is in considering the second of these divisions that a certain vagueness is unavoidable, and the best solution of the difficulty I could think of was to classify all the cases in which the species of animal could not be identified in one subdivision, and those in which identification was possible in another.

Animals at Rest.

The Dog

Kells, Galloway.—Here is the only figure of man's most faithful friend among the animals that I have met with on the tombstones. The stone is dedicated to a gamekeeper, and the dog stands sadly, with drooping ears and tail, beside his master's gun, rod, flask, and a partridge (*op. cit.*, fig. 125).

The Sheep.

Somewhere in Forfar or Kincardine I have seen a solitary sheep on a farmer's tomb, but the reference to it has gone astray.

St Bride's Burying-ground, Pass of Leny, Perth.—In this small wayside deserted burying-ground is another example of a sheep, a most appropriate emblem in the district.

Old Burying-ground, Glenalmond, on the moor.—Mrs Croker, the well-known novelist, drew my attention to this, the only other example I have to record, and afterwards she kindly procured me a photograph



Fig. 47. Glenalmond, Perth.

of it (fig. 47). As the slab is recumbent, the view is foreshortened, but it shows very well a large winged hourglass at the top, hovering over a ploughshare, which is flanked by a skull and crossbones and two triangular-bladed spades, one with a half-handle. Below, on a ribbon, the brief command MIND DEATH startles the passer-by far more effectively than the ordinary MEMENTO MORI. At the very foot stand a sheep and lamb, identifiable as such mainly by their tails, as the

design is very poor. M'Callum, the name of the farmer, can be made out on the inscription.

The same name occurs on another slab, with a cherub, ploughshare, skull, crossbones, and the motto MIND DEATH, dated 1781: and yet another slab, of 1743, bears the tree, crown, and (basket-hilted) sword of the Macgregors.

Horse, Ox, or Cow.

The Row, Dumbartonshire.—A horse and three ill-designed cattle are represented, in a conventional manner, standing round a manger, all upon the same stone at *Row* (*Proc.*, xxxvi., fig. 133), and I am not aware of any other example of these animals at rest elsewhere.

Animals at Work.

With a single exception, in which horses are yoked to a stage-coach, all the examples under this head occur in ploughing scenes. When my previous paper was read I had not met with any instance of the kind, and it was only quite lately that I became aware of one near Edinburgh, and learned from the Rev. Dr Landsborough and other friends that such ploughing scenes are not uncommon in the West country, particularly in Ayrshire. As it is sometimes impossible to tell, even from a good photograph, whether the animals are intended for horses or oxen, and other cases are doubtful from want of sufficient information, I make a separate class of these, which I shall first notice briefly.

Ploughing Scenes in which the kind of draught animal is doubtful.

Colmonell, Ayrshire.—This scene has already been noticed, page 89.

Craigie, Ayrshire.—Also previously noticed, p. 86. Three or four "horses" are said to be drawing the plough, but without more information it is better in the meantime to keep this example in the doubtful class.

St Quivox, Ayrshire.—Three if not four ploughing scenes here, on the authority of the Rev. James Wilson, the parish minister. (The Rev. Dr Landsborough.)

Loudoun, Ayrshire.—Mr Richard Tarbet, Buittle manse, Castle-Douglas, writes:—"I have seen in Loudoun churchyard, on a stone leaning to the wall at the foot of the session-house stair, a ploughing scene with four horses (?) and a man. I think there were other carvings,

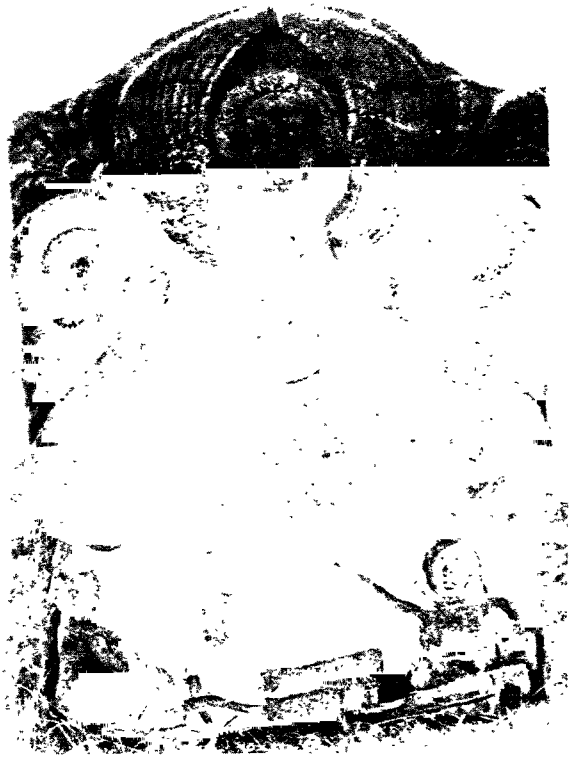


Fig. 48. Kilwinning, Ayr.

a Latin quotation, and, if I mistake not, a well-shaped helmet, but I can't be sure about that."

Kilwinning, Ayrshire.—The Rev. Archibald Hunter has sent me a photograph (fig. 48) of a ploughing scene on a rather remarkable stone of

massive design, with a cherub at the top, whose wings form a circle round the head. At the foot, four animals, not unlike horses, but less than lambs when compared with the man at the handles and the other wielding a whip, draw a plough laboriously along.

Kilwinning. No. 2.—Mr Rae Macdonald, F.S.A. Scot., has drawn my attention to another stone here, of which he made a sketch (fig. 49). In the middle, at the upper part, facing the spectator, a



Fig. 49 Kilwinning, Ayr.

clergyman wearing bands holds an open book, below which is inscribed —"No man having put his hand to the plough and looking back is fit for the kingdom of God." At the foot is the plough drawn by two sheep-like animals. The man, if not incurring the reproach of the text by looking back, seems at least to be standing idle.

Ploughing Scene, animals recognisable.

Liberton, Mid-Lothian.—Not far from the tower of the church there stands a tablestone which perhaps surpasses all others in the Scottish

Lowlands in the number and interest of its carvings. The table itself bears the original inscription (fig. 50), generally in Roman capitals, but the proper names in early English letters, the capitals of the latter highly ornate, with finely cut flourishes surrounding them, now partially erased. A modern inscription follows below. This monument is the

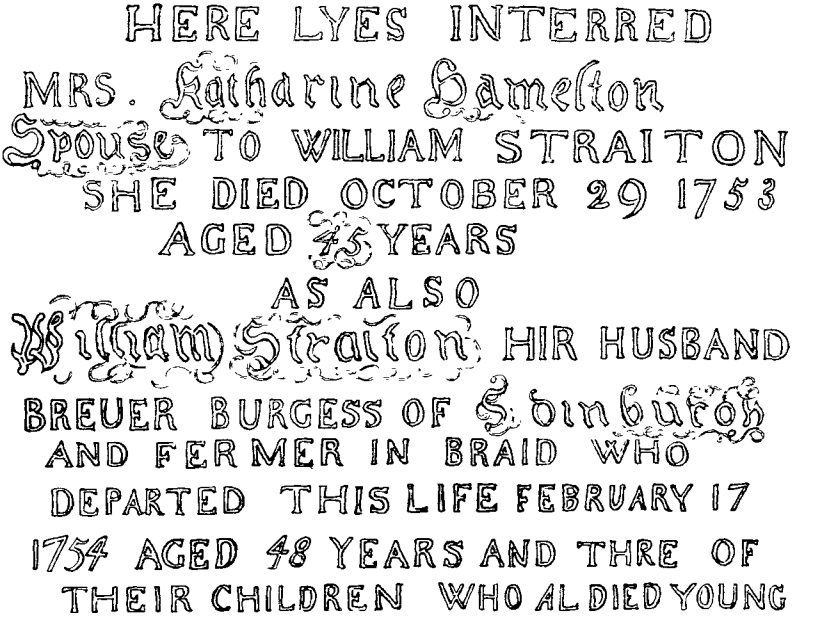


Fig. 50. Inscription on Tablestone, Liberton, Midlothian.

best, though not the only instance in which the artist, recognising that the table is the natural place to bear the inscription, has lavished all his skill in carving designs on the supports, ill adapted as they are to show them off to advantage. Here the supports consist of a slab at each end, and in the middle of each side a squat, bulging, round, spirally fluted column, otherwise plain (fig. 51). A unique characteristic of the carving on the end slabs is that it covers not only the



Fig. 51. Tablestone with recumbent statue, Liberton.

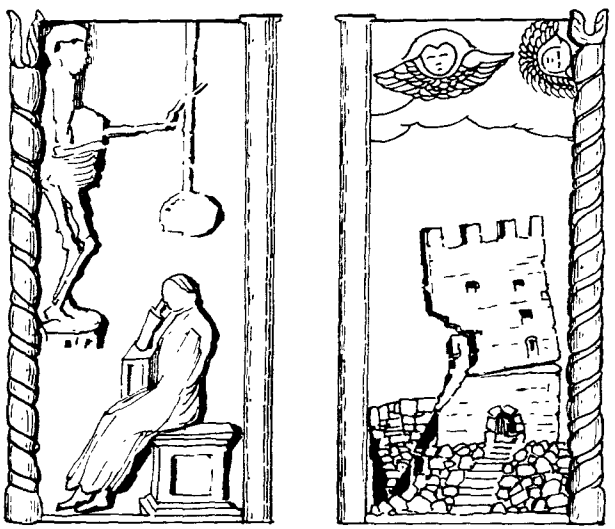


Fig. 52. Interlaced pattern on support of Tablestone, Liberton.

outer sides and ends, but the inner sides, where it can only be properly seen by stooping and getting one's head under the table.

The east slab has on its outer face a beautiful interlaced pattern in relief, composed of the long stalks of conventional leaves (fig. 52).

On its south end a skeleton stands on a corbel, projecting from an ornamental pillar at the edge of the stone, and is in the act of severing with a pair of scissors a cord suspended by no visible means



a *b*

Fig. 53. Liberton.

from above, and tied to a stone or other heavy object at the end, which overhangs the head of a mourning female, sitting on a tombstone (fig. 53, *a*).

On its north end a tower, founded on a mass of boulders or rocks, but rent across the middle, is in the act of falling (fig. 53, *b*). A large fragment, detached from the rent, already lies at the foot, on the rocks, and its detachment is evidently causing the fall of the whole upper mass of the tower.

On its inner face is carved a figure of Ceres, seated (fig. 54, from a rubbing and sketch), and surrounded by foliaceous decoration, with ears of corn above her head, and holding in one hand a sickle, and in the other a spade (?) The carving is considerably defaced.

The west slab, on its outer or western face, has the ploughing scene, so well depicted that every detail is perfectly recognisable (fig. 55).

Here, for the first time, I can produce indubitable evidence of the



Fig. 54. Liberton.

employment of draught oxen. That they were in common use in Britain in the seventeenth and eighteenth centuries is sufficiently well known, but it may be worth recording that so late as the middle of the nineteenth century I have seen a farmer conveying his farm produce into the city of York in a cart drawn by a bull, and in the parish of Arbirlot, Forfarshire, a man ploughing with a team consisting of a horse and an ox.

The whole face of the slab depicts in a pleasing manner the agri-

cultural work upon a farm in autumn or spring. In the background, at the top of the stone, stand the farm-buildings, at the foot of a chain of hills, no doubt intended for the Braids, with triangular objects on them, probably hay-ricks. Below this is a furrowed field, along which a man drives a pair of horses yoked to a harrow. In front of him a sower walks towards a woman beside an open bag, apparently to refill his bag with grain. At the bottom the ploughman

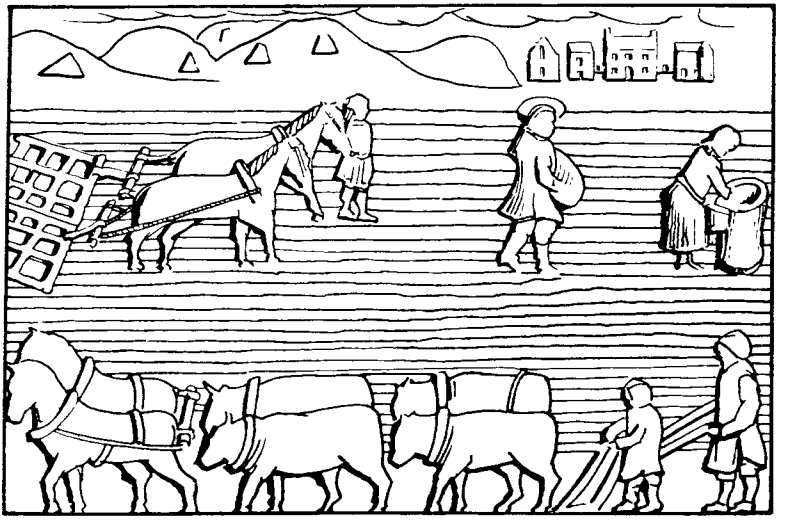


Fig. 55. Liberton.

with an assistant holds the massive plough, which is drawn by two pair of oxen and one pair of horses, the horses in front. The whole is executed with much spirit and fidelity.

The south end shows the farmer (fig. 56, *a*), apparently incongruously clothed in his Sunday garb, carrying bundles of corn under his arms and in his hands, no doubt typifying harvest.

The north end of the slab has foliaceous decoration (fig. 56, *b*).

Its inner face has an arched recess, but if anything has been carved in it, the design cannot now be made out.

The interest of this remarkable stone does not stop here. On the ground under the table, resting on a stone pavement, lies a semi-recumbent effigy (fig. 51). It is on its right side, with the left arm across the chest, pressing a skull to the breast. The head and right hand are gone, but the arm, which had supported the head, remains, with the elbow resting on a cushion consisting of a sheaf of corn.



a *b*

Fig. 56. Liberton.

The body is clothed in a loose dressing-gown, the folds of which are very delicately carved. The legs below the knee and the feet are likewise gone, but had rested on the figure of a lamb, the body of which is *in situ* though the head has disappeared. Tradition has it that the farmer met with an accident in the field, lay down with his head on a sheaf of corn, and died on the spot, but I am informed by Mr George Good, author of *Liberton in Ancient and Modern Times*, that Mrs Mary D. Burns, a granddaughter of the deceased, always

understood that he was injured on the field by a runaway horse, and was carried home to die.

William Straiton, whose death in 1754 is recorded on the stone, although a man of mark and substance, and a burgess of Edinburgh, did not take any part in city affairs, as I am kindly informed by Bailie Dobie and the Town-Clerk, Mr Thomas Hunter. The name, William Straton, Brewer, is entered on the burgess roll, 23rd September 1730, by right of Robert Straton, burgess, his father, who is described as "tenant in Bread," and was made burgess on 20th May of the same year. William therefore had succeeded his father as tenant of Braid.

The drawings of the Straiton monument are by Mr F. R. Coles, except figs. 49, 53, and the photographs were taken by Miss M. C. Christison.

Stage-Coach and Four.

Canongate, Edinburgh.—On one of the few old headstones left in this old burying-ground occurs this quite unique carving (fig. 57, from a photograph by Mr F. C. Inglis). On the pediment is a skull above a single thigh-bone. Then comes the inscription—

THis Ston is
For
the SOCIETY of Coach
Drivers in Canongate
it Was Chiefly Erected
by THOMAS JAMIESON.
ROBERT MAVING
TREASURER 1767.

Immediately below, carved in relief, a stage-coach is shown in the act of crossing a stream by an old-fashioned, high-arched, low-parapeted bridge. The lumbering vehicle is on the crown of the arch, and the great caution with which the driver guides the team down the descent

from the crown is admirably rendered. Although a good deal worn, all the details of the coach, showing the way it was hung on springs, etc., are evidently given with perfect accuracy. The whole

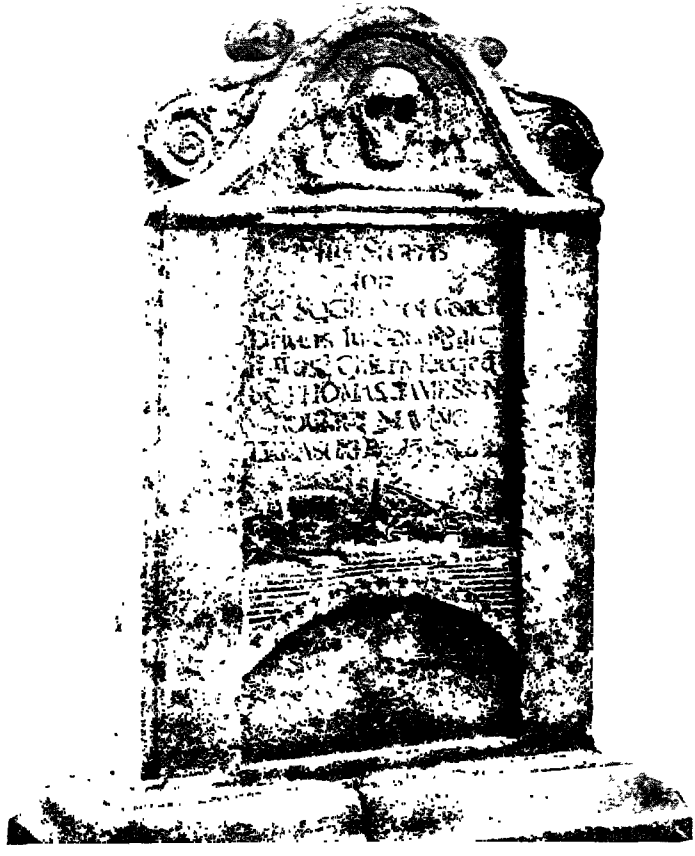


Fig. 57. Canongate Kirkyard, Edinburgh.

surface of the stone has been riddled with small-shot and swan-shot, said to have been fired by the watchmen in the "resurrectionist" days.

The enlarged view (fig. 58) shows how the group would come out in a more perfect rubbing than it is possible to take on the present rough surface, but nothing is put in that is not clearly indicated either to the eye or on the rubbing.

Highland Porters.

Liberton, Mid-Lothian.—Not far from the Straiton monument is a very small headstone, which displays an unusually interesting subject

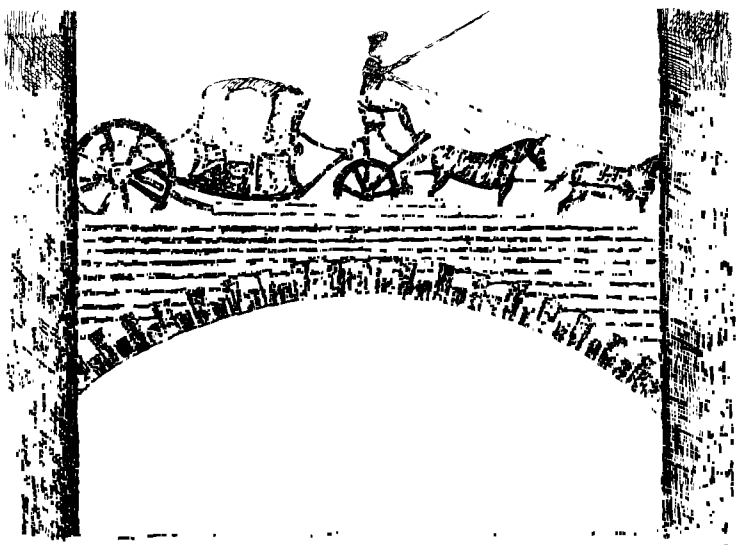


Fig. 58. Canongate Kirkyard, Edinburgh.

(fig. 59). Above the inscription, two men, designed with much spirit and in high relief, step briskly along, bearing on their shoulders a pole, bending under the weight of a suspended barrel, which the man behind is in the act of balancing with his right hand. The stalwart figures wear bonnets and plaited kilts, with aprons in front. The legs and feet are much decayed, but show distinct traces of check hose. The inscription states that the stone was erected in memory of her father

and mother and three grandchildren by Janet Leeis. There is no date on the stone, but it agrees in style with others near it of the middle of the eighteenth century. An exhortation runs up and down the curved top of the pediment in a single line, of which only *Weep not for m* can be made out on one side, and *time* on the other. This is the only



Fig. 59. Highland Porters, on Headstone, Liberton, Midlothian.

monument I have seen in the Lowlands that displays the Highland dress, till we come to quite recent times.

There are many other interesting stones in Liberton kirkyard, some, carved with much beauty and taste, tottering to their fall, soon to share the common fate of monuments when the families that erected them are extinct. No one is responsible for their upkeep, and the inclination of those who might be expected to take an interest in them is generally destructive rather than conservative.

MONDAY, *9th January* 1905.

COL. A. B. M'HARDY, C.B., Vice-President, in the Chair.

A Ballot having been taken, the following were duly elected Fellows:—

Major D. C. S. LINDSAY CARNEGIE, 6 Playfair Terrace, St Andrews.
JAMES A. CLYDE, K.C., 17 Heriot Row.
CHRISTOPHER N. JOHNSTON, K.C., Sheriff of Inverness, Elgin, and Nairn, 4 Heriot Row.
GUSTAV A. V. NEWLANDS, 27 Great King Street.
WILLIAM SHERER PORTEOUS, 3 Priestfield Road.
REES PRICE, 163 Bath Street, Glasgow.
WILLIAM REID, 2 Bellefield Avenue, Dundee.

The following Donations to the Museum and Library were laid on the table, and thanks voted to the Donors:—

(1) By the Right Hon. Sir HERBERT MAXWELL, Bart., LL.D., M.P., *President*

Polished Axe of clayslate, $4\frac{3}{8}$ inches in length by $2\frac{3}{4}$ inches across the cutting face, found on the Home Farm, Penninghame, Wigtownshire.

Roughly formed Axe of greenstone, $4\frac{3}{8}$ inches in length by 2 inches across the cutting face, with a longitudinal depression on each side, found on the farm of Carty, Penninghame, Wigtownshire.

Flanged Axe of bronze, $4\frac{1}{8}$ inches in length by 2 inches across the cutting edge, the butt end imperfect, found in a peat moss at Drigmorn, Minnigaff, Kirkcudbrightshire.

(2) By Sir FRANCIS TRESS BARRY, Bart., M.P., Hon. Mem. S.A. Scot.

Slab of slaty sandstone, 3 feet $2\frac{1}{2}$ inches in length by 1 foot 8 inches in breadth, sculptured in relief with an eagle and fish, etc., and having an Ogham inscription along one side, from Latheron, Caithness. [See the

communication in last volume of the *Proceedings* by Dr Joseph Anderson.]

Oblong oval Dish of wood (broken and split), 13 inches in length, 7 inches in width, and about 5 inches in depth, having a projecting ledge handle at each end, from a peat moss at Smerral, Caithness.

(3) By Col. J P. Robertson, C.B., Callander Lodge, Callander.

Polished Axe of darkly mottled porphyritic stone, $12\frac{1}{2}$ inches in length by $4\frac{1}{2}$ inches in width across the cutting face, the cross section in the middle nearly circular, the butt end conically tapering and pointed, from Walls, Shetland.

Five rude Implements of sandstone, of the flattened oval type, and portion of a sixth, from $10\frac{1}{2}$ inches to $3\frac{1}{2}$ inches in length, from Shetland.

Wedge-shaped Hammer of greenstone, 8 inches in length by $3\frac{3}{4}$ inches in greatest breadth and $2\frac{1}{4}$ inches in thickness, the perforation for the handle $1\frac{3}{4}$ inches in diameter, but narrowing slightly from the surface inwards to the centre, found near Lochmaben, Dumfriesshire.

Axe of micaceous schist, $12\frac{1}{4}$ inches in length by $3\frac{3}{4}$ inches across the cutting edge, the surface apparently waterworn and roughened by weather, the edge partially ground smooth, found in the bed of a river at Guldalen, south of Trondheim, Norway.

Modern Scythe-sharpening Stone, a roughly chipped, oblong, rectangular piece of sandstone, purchased from a shop in Molde, Norway, where numbers of others having the same roughly chipped surfaces were for sale. As a lot, these rudely shaped sharpening stones recalled the rudely chipped implements of sandstone found in Shetland.

(4) By Walter Laidlaw, F.S.A. Scot., Jedburgh.

Cast of a portion of a Cross-shaft, $12\frac{1}{2}$ inches in length by 9 inches in width by $3\frac{3}{4}$ inches in thickness, having an interlaced pattern boldly sculptured on one face. The fragment was found in a garden at Ancrum, and is figured by Mr Laidlaw at p. 31 *antea*.

(5) By Mr Robert Beatson, Camelon.

Small Altar of sandstone, 2 feet 2 inches in height, $10\frac{1}{4}$ inches in width across the front, and 9 inches across the sides at top and at base, the side-corners bevelled off, the front bearing an inscription—

MILITE
S·L·H·A
DIE
VIRT
L·M

The characteristics both of the altar and of its inscription are unusual. It was found in digging sand at the south-west corner of the south camp, Camelon.

(6) By the St Andrews Antiquarian Society, through Dr D. Hay Fleming, F.S.A. Scot.

Portion of lead Pipe, $8\frac{1}{2}$ inches in length and $1\frac{3}{4}$ inches in diameter (made of sheet-lead turned over), found in North Street, St Andrews.

(7) By James Curle, *Librarian.*

Die Alt-Germanische Thierornamentik, von Bernhardt Salin. 4to. 1904.

(8) By Professor P. Hume Brown, F.S.A. Scot.

Scotland in the Time of Queen Mary. 8vo. 1904.

(9) By the Clan Lindsay Society.

Publications of the Clan Lindsay Society. No. 3. 1904.

(10) By L Ingleby Wood, Architect, the Author.

Scottish Pewter Ware and Pewterers. 4to. 1904.

(11) By William Reid, the Author.

Guide-book to the Old Steeple of Dundee. 8vo. 1904.

The following Communications were read :—

I.

SOME NOTES ON THE ACCOUNT-BOOK OF DAME MAGDALEN NICHOLSON, WIDOW OF SIR GILBERT ELLIOT, FIRST BARONET OF STOBS, 1671–1693. By ALEXANDER O. CURLE, F.S.A. Scot.

Sir Gilbert Elliot married as his second wife, about the year 1661, Magdalen Nicholson, daughter of Sir John Nicholson of Lasswade, of the family from whom Nicholson Street in this city takes its name. On his death, which occurred about the year 1681, he left surviving him his widow and four children: William, only surviving son by his first wife, who succeeded to Stobs and the baronetcy; Gilbert, another William, and a daughter Magdalen, who married Sir Robert Pringle of Stichel in 1688, by his second spouse. In the year 1659 he had purchased from his brother-in-law, Lord Cranstoun, a considerable estate in the south of Roxburghshire, in the valley of the Rule, comprising the properties of Woolie (now Wolflee), Wolfhopelee, Maksydshaw, Catley, Catleyshaw, and Stonedge, in which property his widow was by her marriage-contract liferented, and to it she retired after his death, taking up her residence in the first instance at Woolie. Like so many housekeepers at that period, when money was so scarce, she kept a more or less accurate account of her expenditure, employing for this purpose a small volume bound in parchment, in size $7\frac{1}{2}$ inches by 3 inches, now in my possession. Previously, but for only a short period, this journal had been used by someone else, perhaps the laird himself, and there are three distinct handwritings in it, but the identity of Magdalen Nicholson's is fully established by comparing a receipt in her own name, one of the last entries in the book, with her signature attached to a trust-deed which she executed for behoof of her creditors in 1690. I see no reason why we should not accept this as a typical country gentleman's establishment in the last quarter of the seventeenth century. The family had owned Stobs for a hundred years,

were well connected, and though in good circumstances for those days, were not wealthy. The estate from which the widow drew her liferent is still largely hill land, the lowest part at an elevation of 500 to 600 feet above sea-level, and at that date the rental must have been small. Money was by no means plentiful, as the numerous payments in kind—oats to the shearers and the webster, draught ewes in part payment to the man that pointed the house—and the manner in which the servants received their wages by irregular instalments to account of arrears fully testify: but notwithstanding, the household enjoyed a standard of comfort higher, I think, than has been allotted to people of their class in some descriptions of the social condition of the people about this period. When the accounts were kept in the country it is not easy to tell what was supplied for the table, as the produce of the farm and garden must have largely sufficed: but as the widow apparently spent a part of the winter in Edinburgh, the blanks may be filled in from the accounts kept for these months in town.

The volume commences with "an account of drinkmoney given out in the year 1671": thus the heading, but in reality it covers the expenditure for two years. This shows to what an extent the family visited, to whom they gave gratuities, and what sums they gave. They moved about considerably, apparently twenty-two visits being paid in the first year—frequently to Craigmillar and Niddrie, several times to Cockpen, also to Darnhall, and Dryden, at all which places there resided relatives of the Nicholson family. From the number of visits paid in the vicinity of Edinburgh it is possible that the baronet had a town-house. The nurses were most frequently "tipped," from which we may infer that there were children in the party, and the sums which they received varied from £1 9s. Scots to £5 12s.,[1] £2 18s. being the most usual amount. Sums are entered as being "left" at the various houses—£2 18s., £5 12s., or £5 16s. usually.

[1] Except where otherwise stated, all sums of money throughout this article are given in Scots currency.

On two occasions something is given to the gardener, and once a footman received 13s. 4d. The "Seddans men" get £5 12s. for their services, but whether for one or more occasions it does not relate. The amount of the visits for the first year was £169 5s., and the total for the two years amounted to £255 15s. 10d.—no inconsiderable sum in those days.

And now we turn the page and come to another instructive entry. "The number of ye books that was in ye lady's stodi when I furs saw it 3 day of November 1680." Fourteen volumes in all, and a dull collection for a country-house library, or at least for a lady's boudoir, as perhaps the "stodi" was. There is nothing to indicate where this was at—perhaps Woolie.

1. The Annals of ye Old and New Testament.
2. Josephus of the Antiquities.
3. The historie of ye civill wares.
   ("The history of the civill wares of France," by H. C. Davilla, translated by Sir C. Cottrell and William Aylesbury. London, 1647–48; folio, 2 parts.)
4. Mr Dee on Spirits. (A well-known work, published in 1659.)
5. Ye historie of ye Reformation in Scotland. (Knox's "History": probably the folio of 1644.)
6. Mr Durham on ye Revelations.
   ("Commentary on Revelations," by James Durham, of Glasgow; published in Amsterdam; folio, 1660.)
7. A devin historie on tou Damsels.
   (I have been unable to identify this, but the cacography suggests a manuscript work.)
8. An exposition of the laws of Moses.
9. The second part of ye marrow of ecclesiastical history.
   (The proper title of this work is "The Marrow of Modern Divinity, the second part; whereunto is added the difference betwixt the law and the gospel. By E. F., author of the first part." London, 1649; 8vo. The author's name was Edward Fisher, and he published the first part in 1645.)
10. Papismus Lucifugus.
    (The full title of this work is "Papismus Lucifugus, or a faithful copie of the papers exchanged between Mr John Menzies, Professor of Divinity in the Marischal College, Aberdeen, and Mr Frances

Dempster, Jesuit, otherwise surnamed Rin or Logan"—by John Menzies; printed in Aberdeen in 1668.)
Philip Commines.
3 littill preiching bouks of writ and littill Phisik bouk.[1]

The laird was taken seriously ill towards the close of the year 1680, and in December and the early months of the succeeding year ran up a large account with George "Stirlin" for drugs, etc., the prices of which, unfortunately, are not given. As a sample we may take the 20th of December, which runs thus:—

"Item a plaister for ye back
Mor a plaister for stomackik
Mor 3 Noduls for Brothes
Mor a bagg for whit wynne
Mor the stomackik electuari
Mor the strengthing opiat
Al ther cam in on day."

He had further "plaister" for various parts of his body, drugs with curious names, "apotzeme," "immulsions," "cooling siddis," "gargarisms," etc. He was bled, of course, and received more than one "big glas of serrup for the host." The account closes on 19th April 1681, but whether he recovered or succumbed to the treatment or the disease there is nothing to show. His name, however, no more appears in the pages of the journal.

The accounts are very irregularly kept, at first being more of the nature of memoranda; and not until January 1687 did Magdalen Nicholson employ the volume for her daily use, and from that date till January 1693 the accounting is more or less continuous. For a portion of that period she farmed Woolie, and collected the rents from the other farms on the estate. We thus get a glimpse of rural life in the district, as well as an insight into the household economy. In the first place, therefore, I shall draw attention to entries of interest connected with the farming and outdoor life generally, and treat of the housekeeping

[1] I am indebted to Mr Edmond, Librarian of the Signet Library, for kindly assisting me to identify these books.

later on. The live stock on the farm consisted of sheep, cows, and a few cattle, and we read of trafficking with the sheep under the still familiar names of hogs, wedders, and dinmonts. The prices are all stated in Scots currency, and it is remarkable how nearly the purchasing power of the pound Scots then approximated to that of the pound sterling at the present date.

"24 Juin—year '90

"Received from Adam Nicol tenant of ye Owiry 48.00.00 for ceb (*i.e.* sib) yows he got 28 yows and should give 46 shillings for ye pis of them"

"the furs of Juliy '90

"I sold to Jams trumbl 10 tups 7 of them at 3 p. and 3 at 4 shilin but I shuld give him bak of it—I have received 18 pond of the tups"

"the furst of Juliy '90

"Sold to John Mer 44 dimont and gemur and 8 pond sterling to be pay at redmes."[1]

"Oct, 13 day 91

"I cans sel my son's drought lams alevin of them ther was gotin for them two shilin a pis it comes to 13p. 4s."

Twenty pounds was given to James "tromble" for a cow, and a "stot" sold at Chester fair realised £16 9s. "13 Sept. 1692 To John Robsin for gresin of 7 yong bist a sumber and 2 oxin a month 10.14.0." "24 Aprill, 92 Counting wt my son he told me that he had got from Adam Nickl 20 yows and lams at 6 and 6 pine the pis which maks 8.0.0." This seems to have been a payment to account of rent. On the arable land grew crops of oats, bear, and peas. "May 1692 ther was a stak cosin of oats ther is in it of good oats 4 bouls a half and of hors corin 6 halfs and of pis 9 mell half piks"

"ther pis was onder ye oats."

The following entries illustrate the price of grain:—

"24 of Nov. My son got from Walter Alton 12 bouls oats corn and stra at 7p and 5 shilin ye boul coms to 87.0. Mor my son got from hem 10 bouls at 9p. ye boul corn and stra it comes to 90

"Mor 6 furlets of ot 00 9

"Mor 26 threv of straw at 6 shin ye threv 4.16.

Roodmas, 14th September O.S.

Harvest was not late in 1690.

"August 13 1690—I began to sher ye barin craft abut 11 o'clok ther was Gordi Bar and his wife—also Miler's son James and his sister Margit—also a wife called hieton—they sher 17 threv and 7 chivis

"Friday 15 there was besid of cheris yt sher a wansd. ther was Archbald F & Mamy they sher out ye barin croft ther is of chefs 44

"16 Sette. there is bot Gordi Ba and his wife

"18ma. they sher out ye coufold and there was 21 threfs and a stuk and 5 chifs—Gordi Ba and his wife shir yt day also

"19th they (sher) ye fatland oats and sher 33 threvs gordi ba and his wife, ourself and 4 out of Stonaleg

"Wansday August 20 yeai 90 they sher out ye eister cowfald ther was 19 thrives and a stouk

"I have sold the crop to Adam Nicol for 800 marks."

There were thus four fields in crop—the barn croft, the cowfold, the fatland, and the eister cowfold: they produced 185 stooks of 12 sheaves each and 9 odd sheaves, estimating the threave at 24 sheaves, or 2 stooks; of the value of 800 merks. These fields were probably inclosures of small area. "21 Ap. 1691 John fish for mindin ye park diks 4.7.0. he wants 5 he wrought 17 days." This implies a considerable amount of enclosure, as it took nearly three weeks of working days to mend the dykes alone. The haymaking was commenced on 14th July '91, and on 24th Sept. George Lorain and another man were completely paid "for 28 dayis moing to urself and 2 days ye kerk yard" Adam Morris for 15 days he "cut down hay" got six pounds. Seed oats were bought in February and cost 4s. 6d. the boll. Corn being scarce, rents were paid in services and in kind as well as money. Of services, the carriage of coals from the coal heughs is the only one recorded here. This was done on horses' or ponies' backs, and was undertaken at midsummer, when the long summer days and dry roads allowed the journey to "Etal" or "the Merse" (some thirty odd miles distant) and back to be performed under the easiest conditions and in the shortest time. "Juin 20 day I trow year 91 ther cam from ye Mers 5 lod of coals out of tindall."

"Thorsday July 2 day –91
"Stanleg brought coals as fals—
"Nans Scot tenant there lad in 5 bag of Eitl coal
"John Mer tenant ther lad in 4 bag of Eitl coal.'

In July 1692 of "small and great" coal the tenants brought 47 loads in all.

Cheese, a commodity no longer made in the district, figures largely in the rents.

"22 of August 1692 I received 6 ston of chis and 12 pon ther was 7 chis—ther was also another chis got in befor what wight it was I kno not I her it was 13p.
"6 Supt. 92 I received 4 ston of chis and 3 quarters ther was 6 chisis. Octobr 11 I got 2 chis and ther was a sto and 4 p. wigh. Oct. 12dr I got 35 chisis and they weightet 20 ston
"Adam Nicol hes payed hes ken al bot 3 ston and 3 pond 13 Oct.'

Total, 51 cheeses; and as there is no note of the sale of any of them, it seems probable they were all consumed in the household.

Here is an agreement for the let of Woolie :—

"Aprill 26—year 90
"Agreed wt Andrw trowmbull for ye Mell of Owlliy from Whetsonday 90 to Whetsonday '91 he should give me 100p–20 & 18 kin fuls. he shuld have 2 kay & a hors hes kay shuld be oped among ye tenants & hes hors should go a nonder yt bres."[1]

The tenants' cows were pastured in common. I do not find any receipts for kain fowls, though they were part of the rents; perhaps they were not considered of sufficient consequence.

Much is said of the lack of growing timber in Scotland at this period, so I think it is worthy of note that, though there are frequent entries for the purchase of nails, no wood was bought, and, on the other hand, four trees were sold to a "beliy in hawik" for £5 2s.

Of miscellaneous employment mentioned, there was the casting of turf at 4s. the day, the pulling of turfs of heather wherewith to thatch the stable roof, and the hewing of broom. In July '91 John Fish "the

[1] = in under that price.

diker" was paid for "poting on a cep w^t^ thorins on ye park 6 days." This was probably laying a cope of thorns on the "fail" or turf dyke surrounding the park, serving much the purpose of barbed wire in the present day.

For sport, as we now understand the term, there was little place in the lives of the country folk of those days, and game was secured at any season and by any means possible, to supplement and vary the limited food supply. In April 1690 "puder and lid to shut" was bought for 10s., and a few months later, no doubt preparatory to the run of salmon which takes place in all the Border streams in the autumn, nine pounds were given for a net to fish with—"a man abune Hawick made it." Before the death of the laird, John Ramsay "the fowler" received considerable payments, probably for game supplied, on 13th June 1673, £30, and on 16th August following, £15. On 7th May 1675, £3 was paid to "the fisher." Partridges and moorfowl, which latter would include both grouse and black game, were frequently bought, as also wildfowl, *i.e.* waterfowl. For rabbits £1 16s. was paid for three couple, and a lass who brought a leg of venison received for "drink-money" 4s. Hares or pheasants are never mentioned. Game was chiefly procurable during the spring and early summer, which shows that the pot-hunter was most successful when the severe weather made the birds more easily snared, or their domestic concerns preoccupying their thoughts, found them a readier prey to his haglut. There was a garden, for which seeds and plants were regularly procured, but, with the solitary exception of a "bid of liks" (presumably a bed of leeks), no names of either are given. The gardener, James Turnbull, was also to some extent a raiser of stock, for he sold to his mistress four wethers in August 1691, and received for them fourteen pounds—a good price—and later on received from her twenty pounds for a cow. Apples were grown, and the surplus supply sold "Monday 13th Oct. '91. The fear of Chester was & I got for Apls 2p. 0. 8."

The payments to servants appear at irregular intervals, and sometimes for a year or two these items are entirely omitted; it is thus impossible

to state accurately what number of servants were employed on the farm or in the house. There was "James Partis" (Porteous), apparently a steward or head man, whose wages amounted to 35 pounds, besides his "bountith shun" which cost £1 4s. the pair. "Robie Rig his year's fi' and all he culd crev 12 pounds." Janet Turnbull, the byre woman, for a year's fee and bountith shoes received £10 14s. Marion Armstrong, the cook, was paid at the rate of 20 pounds a year. The reason why ten shillings for a silver spoon were kept out of Mary Porteous's wage we can only surmise. The wages of the footman do not appear, but he received £1 16s. for a coat, and a pair of pumps for him cost £1 4s. Each servant received one or more pairs of shoes during the year, and the wages were further supplemented by payment of drinkmoney. There is no mention of the "scogi's" wages, but she received her shoes, as also did the lass cowherd and sundry poor folk. The servants' wages were frequently in arrear, and were constantly being paid by instalments to account.

I shall now turn to the housekeeping accounts. In the first place it is worthy of note that all the bread was not baked at home, as is sometimes supposed. "3 Jany '88 To Tam Ansliy baxter in Jedburgh for 7 doson of brid hal got thrie months befor 9 . 0 . 0." Besides ordinary bread they purchased rolls when in Edinburgh, and sometimes short-bread. "Oct. 16 '90 Mor a pek of flur bikin short brid and butter to it 1 . 4 . 0," and there is more than one entry for a "kek." Even when at home butter was bought, both fresh and salt, the former at 6s. the pound, the latter at 5s. An entry on 9 April '89 is curious. "Item for 2p. botter 11s. and 2p. of boter ful[1] boter 9 . 6 in all 1 . 0 . 6." Eggs are bought in large quantities throughout the year at a regular price of 1s. 4d. the doz. "Midden" fowls cost 4s. apiece; capons 6s., ducks during the autumn, frequent fare, 3s. 4d. each: and geese £2 16s. for half-a-dozen, which were probably alive. The supply of fish is varied — herrings in small quantities for immediate use,

[1] Foul butter for lubricating is mentioned in Foulis of Ravelstone's Account-Book, published by the Scottish History Society.

and by the hundred apparently for laying in salt; haddocks in the country, so probably smoked: salmon frequently; trout, turbot, and whitings, and oysters occasionally by the hundred. Once only "2 lapsters 6 8," and similarly a pint of mussels.

Ale, not yet supplanted by tea, was the customary beverage at all meals. It appears daily in the accounts when the widow was in Edinburgh, but as she brewed at home, never when there. For its manufacture malt and balm (*i.e.* yeast) were frequently purchased, and on a few occasions small quantities of hops. On 11th June '90 appears an entry, "sent to englon for a pond of hops 12." In September '91 hops cost 4s. per pound, but on 27th February 1681, 4 lbs cost £2 4s. Much of the ale was bottled, as is evidenced by the purchases of corks and bottles: once only is there an entry for "tipe yeal," presumably tap, or draught ale.

When I understand the family to have been residing in the country, a chapin of brandy or sack, usually the former, was got in twice or thrice a month, the brandy costing 14s and the sack 18s. the chapin. At rare intervals claret appears, also cannel water (*i.e.* cinnamon water) and sugar drink. Of meat, besides the fowls of various sorts, domesticated and wild, there was beef and mutton in various forms, also veal and bacon. Of fruits there were "oringers and limons," costing £1 16s. the 2 dozen in February 1681, and the former in May £1 10s. a dozen. Apples in the month of February cost £1 16s. for 7 dozen: pears 7s. the hundred in August.[1] "Chris and Nipis" in July I take to mean cherries and turnips, the latter said to have been used as a table fruit: "gousberis" appear at the end of that month, and on the same occasion 2s. worth of "gilliflours." "A honder chistons[2]" in December cost 7s. Twelve dozen of "geges" bought in April must surely have been dried plums. There were also raisins, currants, and plumdamas. Of vegetables there were "spenich," onions, peas, and carrots.

[1] Perhaps the Lammas pear or the "green pear of Yair," both of which old Scotch pears ripen early in August.

[2] *i.e.* Chestnuts.

To illustrate the fare I shall give here a week's account when in Edinburgh—December –91.

11 Thors. I(tem) for motton bris and bak ribs	£0	8	0
Mor a dis of collops	0	9	0
Mor half a honder chistons	0	7	0
Mor for brid—ot (oat) brid	0	3	4
Mor for 3 chapin of yeal	0	3	0
Mor for herin and milk	0	1	0
(Friday) I give for 2 fuls (fowls)	0	13	6
Mor osters and spis and brid to et them	0	3	10
Mor for a p. of resons and a p. of plum[d]	0	10	0
Mor for 2 brid and a forpit salt	0	7	0
Mor for 3 chapins of yeal	0	3	0
12 Set[d]. I. for a leg of motin	0	10	0
Mor for a pis of bef	0	6	0
Mor a per of kinins[1]	0	12	0
Mor half a p. of pudder suker	0	4	6
Mor a pund of barley	0	2	0
Mor a pint and a muchkin	0	2	6
13 Sond. I. for a quar yeal and broth and pur	0	8	0
Mor a p. of milk and winiker muster	0	3	4
14 Mon. I. for half a honder osters	0	12	2
Mor 2 lod of cols	0	10	6
Mor a lof and ot brid and broth	0	7	0
Mor a quart of yeal	0	8	0
Mor a po. of candl.	0	3	6
15 Tus. I. for a per of rabets	0	9	0
Mor a chap of win	0	18	0
Mor a quart of yell	0	4	0
Mor for 2 lapsters	0	6	8
16 W. I. for osters and winiker brandi and spis	0	6	0
Mor yeal 3 ps and tipe yeal	0	4	6
Mor a leg of motin and ot brid	0	12	0
Mor 4 lod of cols	1	12	0

This is by no means either a poor or uninteresting dietary.

An item which figures frequently in the accounts is tobacco, the price of which is never twice the same, varying from 8s. to 12s. per pound.

[1] Kinins—conyngs—rabbits.

There are two entries which are obscure. One on 11th March 1690 for "toubak stiks" costing only 4s. the pound, and the other in April of the previous year for "2 pounds of toubak for stiks 18/." This may have been for roll or bar tobacco, in which case the "for stiks" in the second entry is merely explanatory of the kind of tobacco, and not to signify the use to which it was to be put. Pipes were purchased by the gross at 18s.

For household utensils entries appear but seldom. An egg plate cost £2 18s.; a mustard dish £1: a pewter plate bought at the Rood fair £1 8s.: "loughghis" (? luggies) 2s. each: cogies and a bread grater, the silver spoon, the value of which was kept out of Mary Porteous's wages, and glasses bought in Newcastle almost complete the list. There is little mention of furnishings: the wrights made three tables: the old settle was put in order: straw was bought for a mat: and the "aris" hangings were scoured by Christian "Pasli" the wauker. There are numerous references to articles of dress, "ferrintin ribons," "pettice of crep," "pinners,"[1] "alamod," "perssion," muslin and calico. Stockings were frequently bought, and sometimes given in charity along with shoes. A napkin was bought for the widow's son William. Two stikit (*i.e.* embroidered) nightcaps cost £2 8s., and "a skin for puches" 5s. Pattens were rather more expensive than shoes, at £1 8s. the pair. The lady's gown, bought at the time of her daughter's wedding to the laird of Stichel, cost £30—an expensive robe. In July 1690, for reasons which are not stated, there was a sudden outburst of extravagance in clothes. "To John Trombl for furnissin and makin of a cot, 6.12.0. Mor 6 ell of pledin to lin a goun to Gilbert, 2.8.0. Mor for 8 ell of flurd (flowered) stuff to be the goun 23.4.0. Mor to Mrs friser Murray for a wiscot to Wilam ye stof I min 16.16." Gloves are a frequent item of expenditure, alike for the dame, her sons and her daughter. The webster attended at the house and wove the yarns into broadcloth, gray, and plaiding: the wauker fulled the kelt, the harden, and the blankets: and the tailor, on his rounds, stayed for a

[1] Caps with lappets, worn by women of quality.

season and fashioned the cloths into garments. The latter was paid by contract. "The 20 September agreed with barnne falconer for a wholl yeer coming to show all my work ten pond in the year."

There is frequent mention of the employment of the services of a "slitter" (slater), which shows that thatching was by no means universal in the district.

There are a number of entries of a miscellaneous nature. The youngest son, William, was still being educated: a grammar and a French book were bought for him, and he had a French master. "The king's spich" cost eightpence, bought in February 1690—I suppose a declaration of policy by William of Orange. The cost of a link and a boy to bear it was 5s. I may mention that these were cleanly folk and bought soap regularly, an item the omission of which has been noted in the accounts of at least one other family at this period. Finally, the indifferent writing and spelling, the abbreviations following no manner of rule, make the MS. in places extremely difficult, sometimes impossible to decipher: but as it was not written for our edification, it is perhaps ungracious to cavil at its shortcomings.

II.

COLINTON CHURCH AND CHURCHYARD. By ALAN REID, F.S.A. Scot

The late minister of Colinton, the Reverend William Lockhart, D.D., laid his parish under many obligations. Not least among these were his care of the ecclesiastical properties, and his successful efforts to popularise the interesting history of his charge. In the year 1895 Dr Lockhart placed a large framed panel at the side of the main entrance to the church, and on this he had inscribed in gilt lettering a clear and concise account of the ancient foundation known as St Cuthbert's of Hailes. This inscription, whose scope and purpose might, with much advantage to local history, be imitated by the custodians of notable churches everywhere, reads as follows:—"St Cuthberth's Church and Parish of Halis, now Colinton, were founded by Prince Ethelred, third son of Malcolm III. and Queen Margaret, and brother of Edgar, Alex. I., and David I., Kings of Scotland, about the year 1095. The ancient Church, which probably took the place of an older Pictish, British, or Saxon foundation, and which was dedicated on the 27th Septr. 1243, disappeared about the year 1560, or was probably destroyed during the Earl of Hertford's invasion in 1544–45, in the reign of Henry VIII. This Church is supposed to have stood near where Hailes House now is.[1] Another Church was placed here in the year 1636, in the reign of Charles I."

The present church is an unpretentious square structure, dating from 1771. Apart from its situation, its only picturesque feature is the graceful belfry, designed by David Bryce, the architect of considerable alterations made on the fabric in 1837. The building has accommodation for seven hundred worshippers, and is neat and comfortable in appearance. Dr Balfour notes, in the *Statistical Account* of 1845, that among the church properties are two silver cups of 1680, and two damask towels presented by David Pitcairn of Dreghorn in 1706. The arched entrance to the

[1] No record or other evidence of this improbability can be traced.

churchyard, with the quaint old vestry flanking the gateway, are pleasing details in the environment, the manse, beloved of Robert Louis Stevenson, and the Water of Leith completing a picture of exceptional charm. A curious relic of resurrectionist times lies near to the south-west entrance of the church. This is a large and massive coffin-cover of iron, so heavy that it could only be raised by mechanical means, under which the dead were kept till nature had decreed their safe and solemn burial.

As is inferable from the comparative nearness of this churchyard to a great city, the monumental sculpture is of excellent quality. Sacred and secular symbolism appear in striking variety, the sacred symbols following prevalent types, the secular emblems partaking largely of a pastoral character. Many of the designs are admirable, and much of the work is excellent. Perhaps it is on what may be termed the architectural side that these memorials are strongest, though they have many other merits, among which age is conspicuous.

The tombstone of a farmer named Ferguson, who died in 1771, rests against the east gable of the gatehouse or vestry. This finely hewn slab (fig. 1) has at one time been mural, though now it rests on a heavy moulded base of later date. The inscription is flanked by flat pilasters, which also support the cornice and pediment, under which are placed a skull with crossbones, and a *memento mori* scroll.

The pediment is of chaste design, and is beautifully worked. A couple of winged cherub-heads appear as supporters, the centre of the floriated panel bearing a striking emblem of the calling followed by the deceased. This is in the form of a man engaged in sowing, the figure being good in drawing and in character, though somewhat dilapidated and nearly featureless.

A few paces south-east of the "sower" stone is the memorial (fig. 2) of another farmer, James Brown, who died in 1743. The inscription reads from the east, and is placed within a richly floriated scroll, well carved and highly relieved. The wings of a cherub-head, set like a pendant to the floriation, are remarkable. Usually these appendages appear as if attached *behind* the figure, but here they are shown distinctly *in front*

A skull and a *memento mori* scroll appear on the base of this graceful slab. The reverse side of this monument is also worthy of remark. Panelled pilasters support a convoluted pediment, which displays a shield bearing the family monogram, underneath being a spade crossed by a single bone. Many of the stones are thus elaborated, and it is difficult in some cases to say on which side the balance of merit lies.



Fig. 1. Sower and "Reaper."

Leaning against the south-east angle of the church, and in such a position that only a portion of its reverse side can be seen, is a stone that may be ranked as the gem of the collection. On the front the inscription appears on a draped ground, flanked by spirally fluted pillars that also support a richly foliated pediment, in the centre of which is a monogram shield. This remarkable pediment (fig. 3) is enriched by a variety of devices, prominent among which are a couple of trumpeting cherubs, a

resurrection symbol shown in Dr Christison's drawing on page 354, vol. xxxvi. of the Society's *Proceedings*. The grotesque head with protruding tongue, binding and crowning the ornamentation, is also noteworthy among the devices that distinguish this interesting stone.



Fig. 2. A remarkable Cherub.

The reverse side of the same memorial (fig. 4) is also elaborate, though not so finely chiselled. Emblematically it is imposing, and perhaps unique. The pediment bears no fewer than *three* skulls, two of which seem to be formed out of the cherubs that appear on the front. The *memento mori* scroll, with crossbones under, still further symbolise mortality,

immortality being indicated by a rather crude winged cherub-head. The inversion of the positions usually occupied by these diverse emblems may have no significance, but it is curious. Under the pediment is a much worn inscription, which, curiously also, reads *vertically*. This is incised on a scroll shield, surmounted by another winged cherub-head, and supported by a couple of very interesting figures of a somewhat



Fig. 3. The Gem of the Collection.

archaic type. That on the left represents a sower, the figure on the right depicting a reaper carrying in each hand a sheaf of corn. In point of style, as in costume, these figures are similar to those at Corstorphine, noted by Dr Christison, and pictured on page 357, vol. xxxvi. of the Society's *Proceedings*.

Within the inclosed burial-ground of the Rev. Lewis Balfour, D.D., who died minister of Colinton in 1860, is built the old tablestone memorial of the Rev. Walter Allan, minister also of Colinton, who died

in 1732. The tablet is attached to the east wall of the Grecian tomb of the celebrated James Gillespie of Spylaw. The emblematic ornaments are placed on the broad splays of the angles, and comprise an open book, a skull with scroll and legend, crossbones, and a winged cherub-head.

In addition to the Gillespie vault, that of Inglis of Redhall is worthy



Fig. 4. Sower and Reaper.

of notice: and considerable interest attaches to the burial-place of the Pitcairns of Dreghorn, situated 9 feet eastwards of the church. The building, now roofless, but in good repair, is in itself remarkable, but interest centres in a series of three sculptured panels built into its southern gable. These are surmounted by a modern brass plate, which records the restoration of the tomb, made in 1864, under the supervision of Dr Thomas Murray, the "annalist" of the parish.

The upper panel shows a shield, richly scrolled, and bearing an elaborate monogram, and supported by two winged cherubs who hold a wreath over the device (fig. 5).

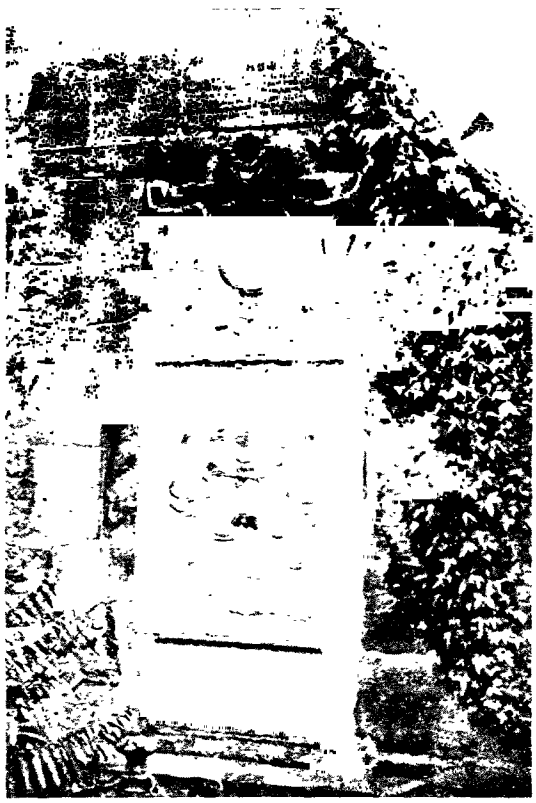


Fig. 5. The Pitcairn Tomb.

The middle panel shows the family arms, with the motto, SPES —— ÆTERN, a central word or syllable being illegible. The lower panel, seen only within a stone-built recess under ground-level, is undecipherable, but the inscription appears in Monteath's *Theatre of Mortality*,

as follows :—"Here lies Mr David Pitcairn of Dreghorn, who departed this life 27th January 1709, and of his age the 60 year, leaving behind him Mary Anderson his wife, with five sons and seven daughters by her." This panel is flanked on the left by a winged sandglass with scroll, and on the right by a skull, crossbones, and scroll. These emblems are hewn in bold relief on the stones of the gable, and show that the ground has risen by several feet since the worthy Writer to the Signet was here laid to rest.

There are half-a-dozen tablestones of much interest. One to the memory of an old farming race, the Finnies of Swanston, lies over their graves, and in front of the modern granite pillar near the south-east angle of the church. The emblems are scrolls, knots, a bone, an hourglass, crossed scythe and dart, a nude weeping figure, and a winged cherub. Another (lying 12 yards north of the entrance, and 4 yards from the west wall) has a very striking appearance, being evidently much older than the others, but bearing no decipherable date.

The supporting figures, so prominent here, are very quaint specimens of old maidenhood. They are attenuated but far from graceful, and the disposal of their bodies, particularly of their feet, has given the sculptor much trouble. In their hands they hold open books: their heads rest on square pillows, and their faces are suggestive of the act of singing. In the centre of the upper portion of the slab appears a skull over crossbones, winged cherub-heads peeping from right and left under these more grisly emblems. A skull is placed at the foot, two small cherubs blowing trumpets acting as its supporters, winged sandglasses in turn supporting them. A coulter and spade, figured to right and left of skull at top, show the occupation of the farmer commemorated here.

The family of Burton, some of whom were famous as artists, are represented by no fewer than *three* closely graven monuments, of diverse periods and styles. The contrast between the modern granite pillar and the ancient tablestones lying beside it is striking and instructive in the extreme.

The oldest slab is literally crowded with symbolism. A winged

cherub-head appears at the top, two winged sandglasses, crossbones, and skulls at right and left, a *memento mori* scroll at the foot enclosing the significant shovel and spade of the farmer's calling.

The Denholme family, also of importance in the annals of the parish,



Fig. 6. The Denholm Stone

are remembered in a full inscription appearing on a handsome upright stone bearing the date 1696. (This monument stands near the south-west angle of the church, and a little to the left of the main door.)

On the east side, or front, this elegant slab shows a panelled inscription, inclosed by a richly carved moulding, crowned by the

scroll-and-leaf pediment, repeated on the reverse. The usual emblems of mortality occupy a central position on the reverse side, which is shown in fig. 6.

Another elegant stone, situated 5 yards behind the last, dates from 1678. Conditions are here reversed, for the *east* side (fig. 7) shows the

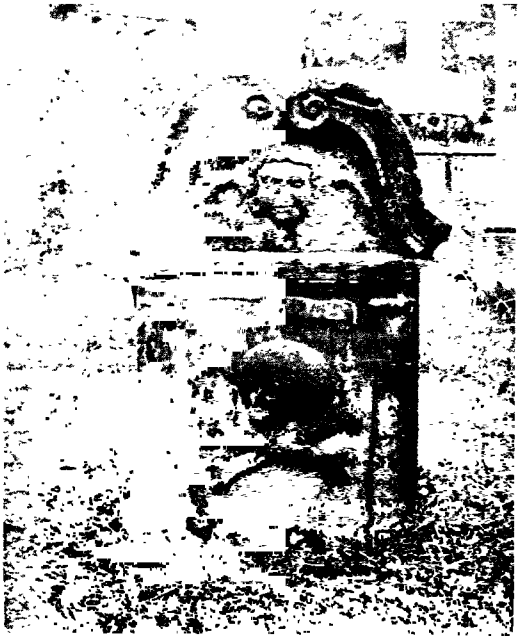


Fig. 7. A stone of 1678.

skull and crossbone emblems, the *west* side bearing an inscription worthy of record in full :—

HEIR LYES JANE THOMSONE
CLOSED WITHIN DEATHS
PERISONER THROV ADAM SIN
BVT REST IN HOVP THAT
SHE SHAL BE SET BY THE
SECOND ADAM FRE

WHO WAS SPOVS TO GILBERT
THOM
WHO DEPARTED THS LIFE
THE FRST OF FEBRVAR HER
AGE 60 ANO DOM 1678.

The pediment moulding is finely cut, and a winged cherub-head of

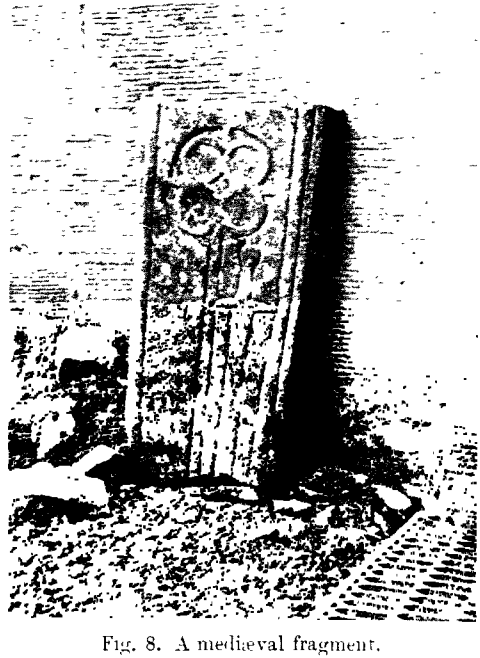


Fig. 8. A mediæval fragment.

pleasing expression fills the tympanum. Underneath appear the scroll, skull and crossbones, and the top edge shows that Gilbert Thom died in 1686. Under the inscription on the west face a coulter crossed by a spade is shown, a winged sandglass surmounting the quaint old legend.

In the statistical account of the parish Dr Balfour notes:—"Part of the cover of a stone coffin was lately taken out of the rubbish in

the floor of the church. It bears on it the rude outlines of a sword and mace, the latter consisting of a simple handle, and ending in four circles, meeting in a common centre."



Fig. 9. The Sundial.

The interesting relic thus described (fig. 8) now stands beside the main entrance to the church, and on the opposite side of the doorway from the historic inscription written by Dr Lockhart. The fragment

measures 2 feet 11 inches in length and is 7 inches thick. At the widest or top portion it measures 18½ inches, tapering to 15½ inches at the foot. The "mace" is simply a cross with a quartet of pen-annular rings, the sword follows well-known lines, and the beaded



Fig. 10. Alexander Crae.

angle adds a touch of elegance to the whole. The so-called Templar Stone at Currie is of the same type, and others from Kilmadock and Kilmore are figured in Dr Christison's paper in vol. xxxvi. of the Society's *Proceedings*.

The sundial, of 1630 (fig. 9), is a delightful piece of work, dainty,

chaste, and in good preservation. Along the top the name of "Sir James Foulles" is inscribed, his arms appearing in the centre of the lower portion, with the date letters on either side. This beautiful object is built into the south-west angle of the church, and completes a group of rarities at once interesting and valuable.

Among a number of smaller monuments, one dating from 1697 may be worthy of attention. It is of somewhat cruder type than the others,

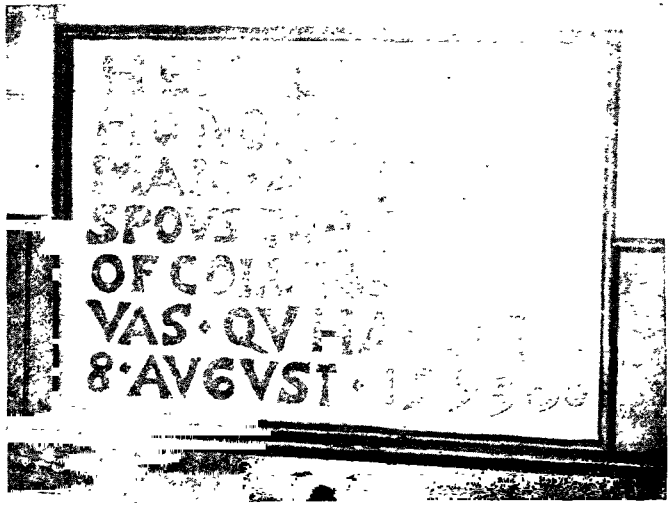


Fig. 11. The Foulis Tablet.

but shows distinction of style. On the west side (fig. 10) a cherub-head acts as keystone of the pediment scrolls: the inscription is incised on a shield, the lettering following the sweep of a draped ornament which connects the singular supporting pillars. It reads:—"Here Lyes Alexander Crae, Husband was to Jenit Beleshes, who deceist May 6, 1697, his age 42 yeares." The grotesque face formed in the centre of the draped band is cleverly designed. The east side shows a *death-head* as key-stone of the pediment—another example of the "double-faced" sculpture of this graveyard—and, underneath, the *memento mori*

scroll, a large skull and crossbones. This interesting slab stands 3 yards south of the "Denholme" stone, and near the south-west entrance to the church.

Within the church are a couple of marble tablets, commemorating Sir William Liston Foulis, 8th baronet of Colinton, who died in 1858, and Sir James Liston Foulis, 9th baronet of Colinton, who died in 1895. These tablets are placed on either side of the central south window, and act as supporters of another tablet (fig. 11) which at once arrests attention by its venerable and distinguished appearance. This fine memorial, dating from 1593, is the tribute of a famous statesman to his wife, Agnes Heriot of Lymphoy, "Ane Honorabil Voman," who died in the neighbouring castle, now a picturesque ruin on Colonel Trotter's property. The slab is placed between the window-sill and the pew-tops, and measures 2 feet 6 inches in length, with a breadth of $18\frac{1}{2}$ inches. The raised lettering is sharply cut, clear and beautiful, despite its age, and of much interest as an exceptionally well-preserved specimen of sixteenth century influence. The word "V A S," or *was*, in the inscription follows common usage, as in the preceding case of Alexander Crae—"Husband *was* to Jenit Belcshes."

III.

THE GREAT DOLMEN OF SAUMUR.

By Rev. J. E. SOMERVILLE, B.D., F.S.A. Scot.

France is a country which has long been known to be rich in dolmens. Fergusson, in his *Rude Stone Monuments*, has pointed out that that class of monument is to be found chiefly on the western side of the country. If a line be drawn from the Mediterranean through Nimes and the Auvergne, and sloping westwards to Bretagne, nearly all the dolmens will be found lying to the west of it. On the east of this line circles and barrows are the common form of sepulchral monument. To the west it is the dolmen. This may point to a difference of race among the prehistoric inhabitants.

The dolmen is very common in the land of Moab, where, on the eastern side of the Dead Sea, they are to be met with in great numbers, as Professor George Adam Smith tells me. They do not occur in Palestine proper. But they are numerous along the north of Africa, and are specially abundant in Algeria. They occur on the west side of Spain, in Cornwall, Wales, the Isle of Man, and a very few on the west side of Scotland.

In France upwards of 3400 dolmens are known, and these are, as a rule, larger, sometimes very much larger, than those to be found in our country. The one to which I would call attention is enormous, the largest in Europe, and, with the doubtful exception of one in Algeria, probably the largest in the world. It is situated near Saumur, a town on the south side of the lower Loire. The dolmen lies about two kilometres to the south of the town, by the roadside, and close to the village of Bagneux. The proportions of the erection are surprising. It is 65 feet in length, nearly 24 feet in width, and 15 in height.

The whole structure, of which a view from the south-east is shown in

fig. 1, consists of fifteen stones: four compose each side, one closes in the back, one partially closes the entrance, four form the roof, and one in the interior supports the largest of these roof stones, which is split. The stones forming the roof differ in size: the largest is upwards of

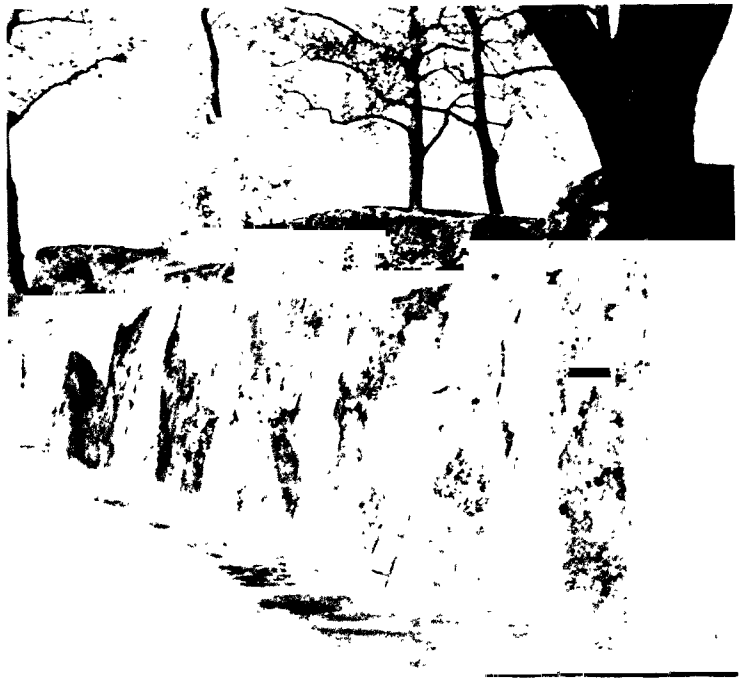


Fig. 1. The Great Dolmen of Saumur, from the south-east.

24 feet in length and 22 feet 9 inches in width, and nearly 3 feet in thickness.

In the year 1775 an excavation was made by an officer of the name of Dolmieu, when it was ascertained that the stones were sunk in the ground to a depth of 3 metres (9 feet 9). No human remains or instruments of any sort have been found in or around the dolmen.

Outside the dolmen stands one stone (as shown in fig. 2), and another lies flat on the ground. The last has fallen down within recent years, and the guardian of the monument informed me that formerly the construction extended out much further, and that when the road was



Fig. 2. The Great Dolmen of Saumur, north end.

being made the end was demolished and the stones broken up for road metal. In short, there existed, what is to be found elsewhere, a passage leading up to the dolmen. The popular explanation of the vast erection is that it was used as a college for the priests of the religion of the time, whatever that was, and this idea is supposed to be confirmed by the absence of sepulchral remains. The entire structure



Fig. 3. The smaller Dolmen, Saumur.



Fig. 4. Dolmen at Draguignan.

consists of gigantic blocks of rough sandstone, nearly all about the same size. It is said that the material does not belong to the district, and that the nearest point where such stone is to be found is Bretagne. In any case it is a problem how the stones were conveyed to the spot where they have been set up. Assuredly these prehistoric races, like the ancient Egyptians, had a knowledge of mechanics we do not give them credit for. A short distance, about a thousand yards to the west of the great dolmen, is another of smaller dimensions, but yet of very considerable size. A view of it is given in fig. 3.

I have said that on the east side of France dolmens are rare. In Provence, Fergusson, in his enumeration of French dolmens, makes note of none. But I have visited one, the only one in Provence, at Draguignan, the chief town of the Department of the Var. It lies a little outside the town to the north. There are in it four upright stones, which are over 8 feet in height, with a very fine table on the top, as shown in fig. 4. This dolmen is of special interest, as being the most easterly one in France.

IV.

REGENT MAR'S LUDGING, STIRLING. WITH SKETCHES.

By J. S. FLEMING, F.S.A. Scot.

The roofless walls consist at present of an ornamental ivy-covered front elevation (fig. 1), with two hexagonal towers flanking an archway, extending about 120 feet across the head of Broad Street, formerly the ancient High Gaite, and, in addition to the sculptured figures and emblems, contain in the east tower the arms of Mar, and in the west those of Mar and Murray, being those of the Regent and his spouse, Countess Annabella Murray: and in the centre, over the archway, the royal arms of Scotland, with the date 1570. This is the date presumably of beginning the work, and the figure (fig. 19), suggestive of being that of the Regent himself, holds a tablet with the date 1572 as the year of its completion, and also that of the Regent's death, 28th October 1572.

Dr Honeyman, LL.D., R.S.A., architect, expresses the opinion that the original Mar building, which stood exactly in the centre of an inclosure extending from the church to a point 32 feet north of the west gable, seemed to have been commenced in 1570, and was almost, if not altogether, completed at the Regent's death in 1572. The hexagonal towers have doors in front, with internal stairs communicating with the upper storey, and on the basement three vaults or booths. The basement is isolated from the upper storey, and the centre passage through the archway has no opening on either side, nor had it a gate on the courtyard, the main entrance to the upper storey being, as he suggests, from the court side.

The eccentric genius Charles Kirkpatrick Sharpe, who published the *Household Book of Mar*, inserts among the illustrations from his own pencil a sketch of Mar's Ludging, but it is a poor work of art and meagre in detail, and delineates none of its many character-

istic ornaments. The intention of the builder, the character of the architecture, the sculptured figures and emblems, with its significant inscriptions, coupled with the Earl's relation to the owner of the

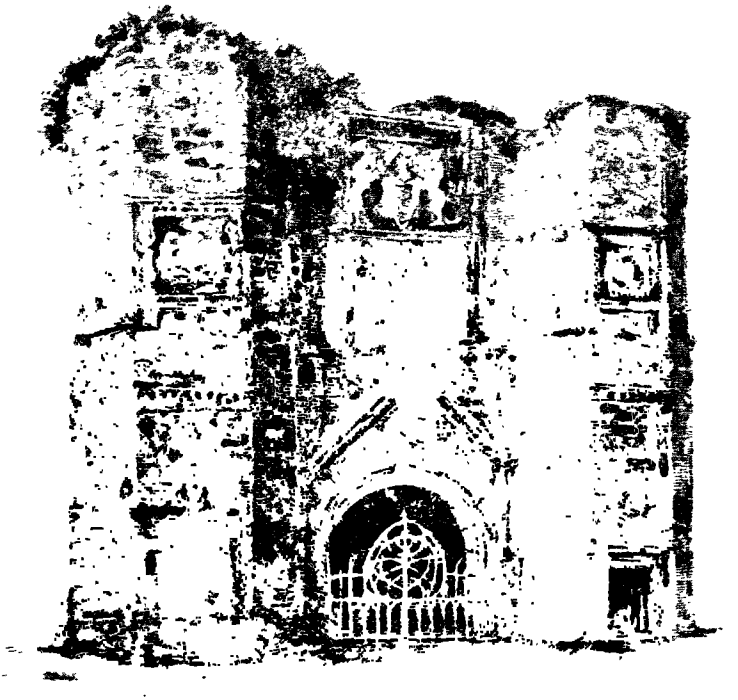


Fig. 1. Front Elevation.

then deserted extensive monastical buildings of Cambuskenneth Abbey[1]

[1] David Panter, Bishop of Ross, was Abbot, drawing the revenues 1552–58, when he was succeeded by Adam Erskine, Chancellor of Glasgow, a nephew of the Regent, by grant of Mary, dated 30th June 1562. This was in implement

(of which the only remains, beyond the bare foundations, are the ancient tower and arched doorway), raised the traditional controversy, still undecided, of the mansion having been built with stones from the Abbey, ruthlessly pulled down and thus disposed of, and that a curse attending the sacrilege prevented it being ever finished or occupied by its builder. The history of its erection is certainly obscure: but architects emphatically refute the above suggestion, and declare that all the building details have been carefully designed and executed for the positions the stones occupy, or if any of them have been so derived, these must have been altered to suit the original intention of the architect.[1] No carved stone of an ecclesiastical character is embodied in the structure: and the inscriptions founded on to support the tradition have no such significance, but are mere moral or religious mottoes, as was the fashion of the period.

The exiled State Secretary, Earl of Mar, in his "legacy to his son," March 1725, refers to it as a good shell of a house, capable of being repaired at little expense, and made suitable for his residence should he

of a gift by her late mother to the Regent, who requested the grant to be conferred on his nephew with the patrimony of the Abbey. From a receipt by James VI., dated 10th January 1594 to David Balfour de Inschery, etc., for 34 merks for the lands of Pullis, etc., in the barony of Cambuskenneth, formerly part of the temporalities of the Abbey, and from the King being designed as in *place of the Commendator* of the convent in a charter dated 20th March 1593, the Crown had apparently taken repossession of the Abbey between Adam's demission and 1608; and numerous other charters refer to the King's possession. On 23rd November 1602, however, the Commendator grants a letter of mortification for support of the hospitallers in Spittal's Hospital, Stirling, and in 1604 John, Earl of Mar, the deceased Regent's son, confirms it: but the charter formally conveying the Abbey's patrimony, and constituting Alexander Erskine Abbot and Commendator of the Abbey, by James VI., is dated at Greenwich, *31st May 1608*.

[1] Billings says, in his *Baronial Antiquities*, "A fanciful eye may justify the tradition by discovering that some of the rich decorations appear as if not intended for the present work: but whatever internal enthusiasm may discover, the origin has no better foundation than tradition": and adds that "the temporalities of Cambuskenneth Abbey were not acquired by the Erskine family until the seventeenth century. His illustration (about 1852), if correct, shows several pillars and one upright figure more than the edifice now bears.

(the son) regain the hereditary office of Keeper of Stirling Castle, forfeited by the Earl's attainder in the 1715 rebellion.

The only two emblems of a religious character are the "Bambino" (fig. 2), forming with its cross bandages an upright pillar, but the face is that of an adult, and an inscription "NISI DOMINUS" under the spread wings of a cherub, a common inscription found on secular buildings at that period. Mr Archibald, a local geologist, at my request, specially examined the stones of the existing ruins of the Abbey, and compared them with those of the ruined Mar mansion. He reported that both buildings were erected of two kinds of stones and from the same quarries. This, of course, is not conclusive. In Timothy Pont's old plan of Stirling, 1620, the mansion is shown with the two towers, having their cone-shaped roofs, and the building otherwise complete: and we have undoubted evidence in the kirk-session and burgh records that it was occupied after the Regent's death, by his Countess and servants, down to at least 1598.



Fig. 2.
The Bambino.

The form of the completed building, which authoritative architects describe as having more affinity to the Gothic style than to the Jacobean Renaissance, resembling in some respects the Palace in Stirling Castle and Falkland Palace, is left to conjecture, as no picture or engraving exists of it. It has a series of sculptured figures (life size), emblems, and monograms, as well as the inscriptions referred to.[1] A row of emblems





[1] The letter A, in many forms, appearing amongst the emblems sculptured on the building, occasions a mystery, as in no documents of that period do the Mar family spell their surname with other than an E, with the exception of Kilgrew's letter,

on each alternate stone forms the seventh course from the lintels of the base doorways, extending from gable to gable and around the two towers; above this course, and similarly set at regular intervals, are half-length figures supporting pillars, which can be identified as cavaliers and musicians, etc., in French costumes of the period of erection, also then in fashion at the English and Scottish courts.

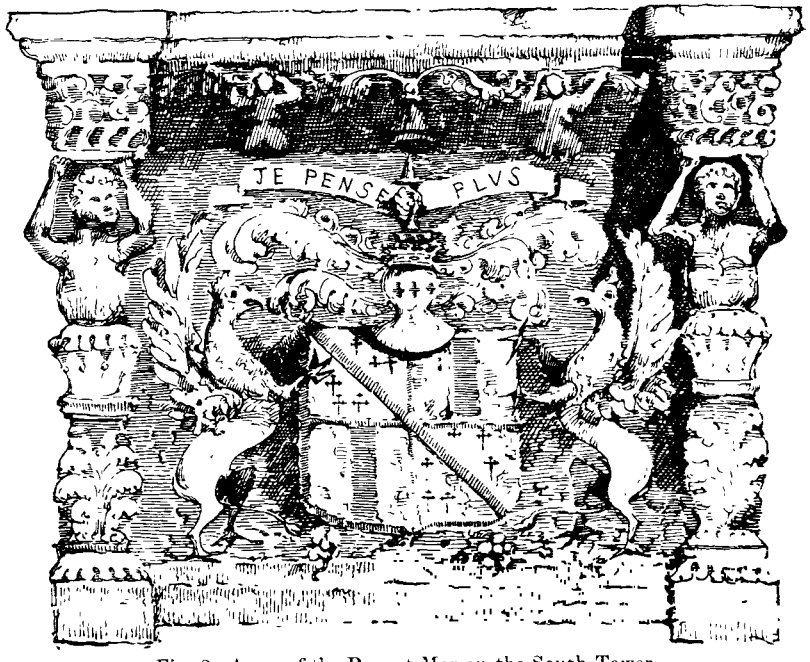


Fig. 3. Arms of the Regent Mar on the South Tower.

The south tower contains the achievement of the Regent (fig. 3) in a shield:—arms, quarterly first and fourth a bend between six cross-

the day following the Regent's death, that Alex. *Arskine*, the Regent's brother, told him there was no hope of life in Mar; and John, fifth Lord Erskine's letter to John Knox, 10th March 1566–7, who signs Airskine. The Regent Mar's royal charter, dated 29th July 1571, during the progress of the building, is to John, Earl of Mar, Lord Erskine, and his daughter is named in it Maria Erskine, and so in numerous other contemporary charters.

crosslets fitché for the Earldom of Mar, second and third a pale for Erskine: crest, on a wreath a dexter hand holding a dagger erect proper, with two griffons, beaked, winged, and armed, as supporters. Motto, JE PENSE PLUS (I think more).

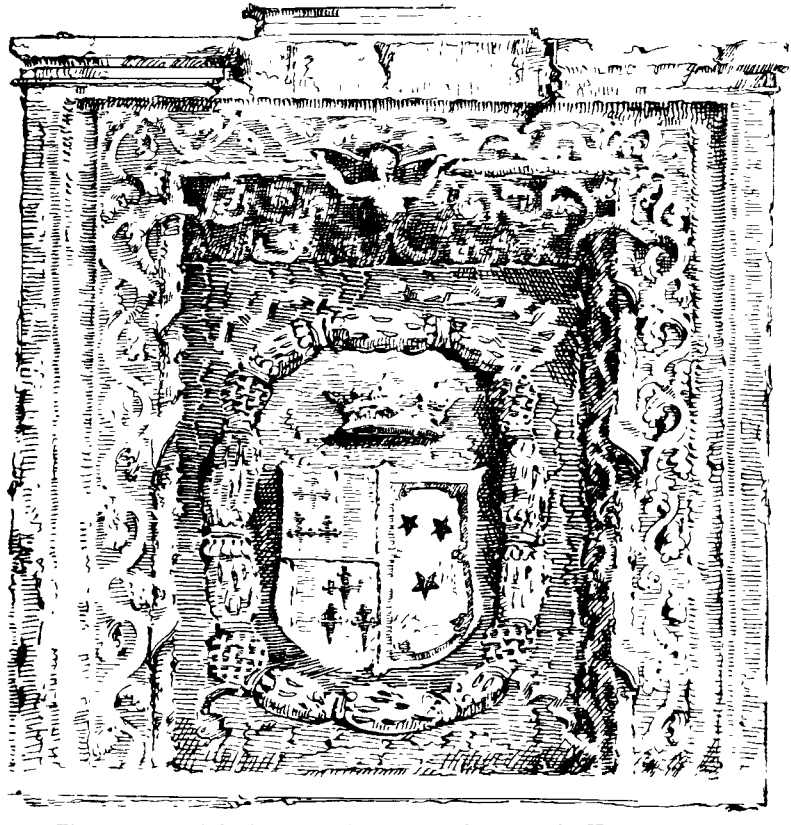


Fig. 4. Arms of the Regent and Countess of Mar on the North Tower.

On the north tower are (fig. 4) the arms of the Regent impaled with those of his Countess, Annabella, daughter of Sir William Murray of Tullibardine—three mullets within a double tressure with fleur de lis, the shield surmounted by a coronet surrounded by a wreath bound by



Fig. 5. Arms of Scotland over the Gateway.

ribbons, its corners intertwined. A similar ribbon-intertwined wreath is on a panel inscribed with the arms of Maria de Lorraine, "Regina Scotie 1560."

The large panel over the archway contains a delicately art-sculptured heraldic panel of the royal arms and crest of Scotland (fig. 5), the earliest public and most perfect specimen now existing so far as known. It is described in heraldic language as a lion rampant within a double tressure flory; supporters, two unicorns gorged with collars and chained, and each bearing a bannerette containing thereon respectively a lion rampant and St Andrew's cross with crown. Crest, on a cushion a royal helmet with closed visor, and over it a lion sejeant affronté crowned, and holding a sceptre and orb in either paw. Motto, IN DEFENCE. Below the shield here are a thistle and initials R. I. 6 (Rex Jacobus VI.), and date 1570.[1]

The sculptured figures are fourteen in number, viz., twelve on the building and one displaced lying in ruins at the rear, and the other with date before referred to; and although mutilated, their costumes are distinguishable.

Beginning from the south, No. 1 (fig. 6), greatly mutilated and headless, has an ornamental doublet with short skirt, terminating in scroll work, over it a short sleeveless cloak. He has his hands clasped, an attitude which shows laced cuffs.

No. 2 (fig. 7), in better preservation, shows more distinctly in detail the "peascod" doublet, with short scalloped skirt below his belt, which is ornamented, slashed sleeves with shoulder and elbow bands and cuffs, his hands resting on his haunches.

No. 3 (fig. 8) is in an apparent act of meditation, his left hand, supported at the elbow by his right, holding his chin. He has

[1] A crowned lion sejeant first appears on Queen Mary of Scots' small signet (1564). There the dexter flag bears the lion rampant and the sinister the St Andrew's cross, and contains the initials M. R.; motto, IN DEFENCE; pendent a heart with St Andrew's cross.— Drummond's *Heraldry of Noble Scots.*) The earliest use of unicorns in royal arms seems to be that on Melrose Abbey, with date 1506, and Rothesay Castle gateway shortly afterwards.



Fig. 6.

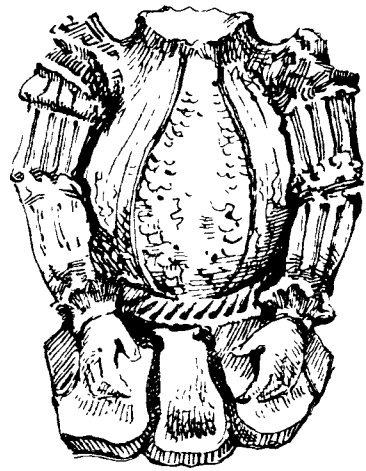


Fig. 7.



Fig. 8.



Fig. 9.

a slashed doublet, shoulder-knots, and lace cuffs. His girdle or waist sash is a cord, and the two ends with tassels in front. The features are much weatherworn.

No. 4 (fig. 9) is a striking, shaggy, bareheaded and roughly-bearded Highland soldier. His right arm uplifted had a sword in the hand, now gone, and on his left is a small targe called a "roundel," which protects his breast. His dress is an ornamented tunic with epaulets, short scalloped skirt, and lace cuffs. His position in the north angle of the south tower overlooks the archway, the main entrance.

No. 5 (fig. 10). The corresponding figure in the south angle of the north tower is also a military figure, clad in armour, with open helmet called a "morion," showing his face, a gorget, back and breast plates, and vambraces. A short wheel-lock arquebus, or long pistol similar to the "dragon," is in his left hand, now broken off: the fingers of the right hand are extended along the butt, which ends in a knob, to the trigger; a powder-horn hangs at his belt. The "dragon" gave to that class of cavalry then armed with it the name of "dragoons" in the sixteenth century. It was a long pistol of 16 inches of barrel.

No. 6 (fig. 11) is headless. He has the long doublet and short scalloped skirt, the sleeves of diagonal rows of puffed and plaited bands with lace cuffs. The left arm is uplifted, the hand of which evidently held some object, but hand and object are gone; the right hand grasps the belt.

No. 7 (fig. 12). A headless musician, but otherwise fairly perfect, strumming a guitar. He wears the peascod variegated doublet with buttons and loops showing the undercloth of the slashed sleeves, a short plaited skirt, laced cuffs, and a deep waistbelt of an elaborate pattern with an ornamented buckle.

No. 8 (fig. 13). A monk, in a frock apparently of Carthusian order: the hood drawn back reveals the face, a flat collar or tippet on his shoulder, his frock in folds: the sleeves of an undercoat show cuffs, his two hands clasping what seems a dog to his breast.

No. 9 (fig. 14). A comparatively complete effigy, with an undis-



Fig. 10.

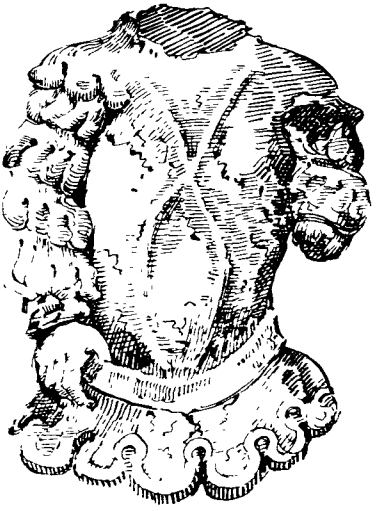


Fig. 11.

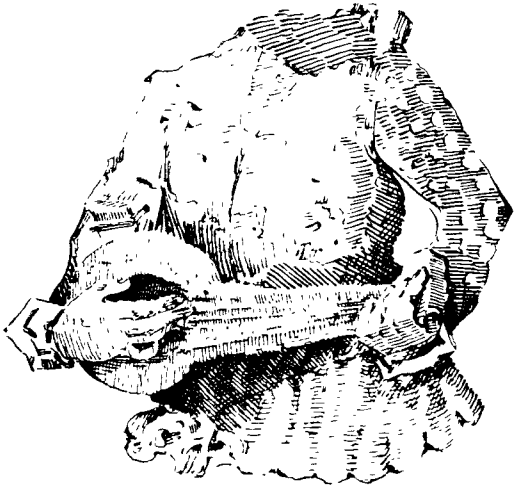


Fig. 12.



Fig. 13.

tinguishable headdress, high fluted collar, row of buttons on the neck of his doublet, which has lappels depending therefrom; the sleeves are slashed, and a cord encircles his waist, ending in tassels. His right hand holds a nosegay to his breast, and his left rests on his haunch.

No. 10 (fig. 15). A headless figure holding an open book in both hands, with an undecipherable inscription on its pages. He is clothed in a plain doublet with short skirt and laced cuffs, over which is drawn a short sleeveless cloak or mantle. The few letters do not compose themselves to the words said to be on the open page, "A Revel of Love Grym," but the reading from the figure's position is difficult.

No. 11 (fig. 16), a military musician beating a side drum, is also headless. He is clothed in a tunic with epaulets, and slashed sleeves with lace cuffs: it has a double band with rows of buttons down the front; it is open at the neck, and has a short plaited skirt.

No. 12 (fig. 17), also headless, is remarkable for the length of the waist of doublet, so as at first to have been mistaken for a lady. This is open at the throat, showing his undervest, has slashed sleeves with cuffs, and the skirt a series of short flaps; the waistbelt is also ornamented. His right hand rests on his belt, and the left on the skirt of his tunic.

No. 13 (fig. 18). This headless figure, displaced from the south angle of the south tower, has a doublet with the diagonal puffed sleeves similar to No. 11. The hands clasped in act of petition.

No. 14 (fig. 19) is the figure bearing in his hands the tablet and date 1572, which is presently inserted in a dwelling-house in Craigs of Stirling, and is more than probably that of the "Regent" himself, for the reasons already given, viz., a gentleman in plain dress, bearing the date of completion of his mansion, and crowned with ivy leaves.

The other carvings and pillars which the half-length figures support are in keeping with those on the Palace of Stirling Castle, erected in 1529 by James V., to whom French workmen were sent by the Duke of Guise, his brother-in-law. In April 1539 "Nycolas Roy, Frenchman,"



Fig. 14.



Fig. 15.



Fig. 16.

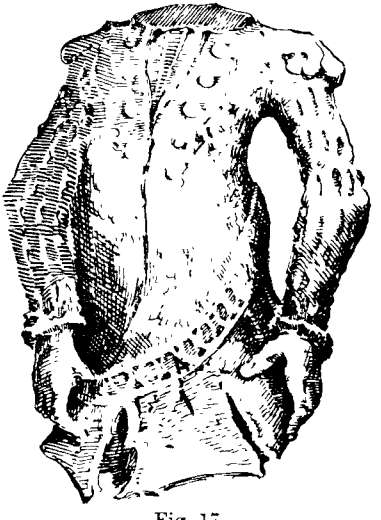


Fig. 17.

is master mason for Scotland, when "six French masons," "with miners (quarriers) from Loram," were sent by the Duke; and in 1559 Queen Mary appoints "John Koytell," apparently a Frenchman, master mason. We find that about the period of its erection work was being done on Edinburgh and Stirling Castles, and the author of the illus-



Fig. 18.



Fig. 19.

trated work *Master Masons for Scotland* expresses his opinion that the two Palaces, Stirling Castle and Falkland, bear French characteristics, with hints of the Renaissance superadded to the Gothic, after the Parisian or Orleans type. The stones used in the Stirling Palace erection were blue, hard, and difficult of being chiselled, and came from Kingudy, on the banks of the Tay, four miles west of Dundee.

The inscriptions over the three doorways are, viz.—

On north tower—

THE MOIR I STAND ON OPPIN HITHT
MY FAVLITS MOIR SVBIECT AR TO SITHT.

On south tower—

I PRAY AL LVIKARIS ON THIS LVGING
VITH GENTILE E TO GIF THAIR IVGING.

Over rear archway—

ESSPY - SPEIK - FVRTH - AND - SPAIR - NOTHT
CONSIDDIR - VEIL - I - CAIR - NOTHT.



Fig. 20. Suggested restoration.

The inference—almost a certainty—is that the King's French architect or master mason is author of the design (fig. 20).

The conclusions arrived at from the foregoing facts are—

1. That the mansion was finished and occupied by the Regent's relict, Dowager Countess Annabella Murray, to at least 1598.

2. That no sculptured stone bears an ecclesiastical character, nor of fashions of an earlier date than the periods of Queen Elizabeth and of erection of the ludging.

3. That the inscriptions carved anterior to the completion of the mansion could have no reference to the public comment on a building then not existing, and are mere moral precepts.

4. That the public records of Stirling make no reference to the spoliation of the Abbey, nor of the adverse public opinion against the Regent.

5. But that, on the other hand, the two kinds of stones used in building both Cambuskenneth Abbey and the Mar mansion are from the same quarries.

6. And that Adam Erskine, the Regent's nephew, was Abbot and Commendator from 1562 to 1608, when Alexander Erskine, the Regent's son, gets a charter from James VI. of the *temporalities* of the Church, then having full right to deal with the Abbey buildings.

MONDAY, 13*th February* 1905.

ROBERT MUNRO, M.D., LL.D., Vice-President, in the Chair.

A Ballot having been taken, the following were duly elected Fellows:—

R. S. ALEXANDER, Grant Lodge, 18 Lomond Road, Trinity.
HERBERT WALTER BACON, 93 Hanover Street.
The LORD BRUCE, Broomhall, Dunfermline.
JAMES GRANT, L.R.C.P. & S. Edin., Stromness.
DAVID COLVILLE LUSK, South Dean, Colinton Road.
H. P. MACMILLAN, Advocate, 12 Nelson Street.
WILLIAM W. NAISMITH, C.A., Auchincampbell, Hamilton.
MONTAGU LEIGHTON RIDGWAY, Architect, St John's House, Dewsbury.
JOHN PENNY WILSON, 11 Drummond Place.

The following Donations to the Museum and Library were laid on the table, and thanks voted to the Donors:—

(1) By the Right Hon. the EARL OF ROSEBERY, K.T., D.C.L., LL.D., F.S.A. Scot., through SIR THOMAS D. GIBSON-CARMICHAEL, Bart., F.S.A. Scot.

Belt-purse or Sporran of seal-skin, with brass mounting, ornamented with human faces in relief.

Small Notebook, with parchment leaves, bound in wood, said to be a piece of the oak which concealed Charles II. (after the battle of Worcester), the boards ornamented with borders and centrepieces composed of scrolls of oak leaves and acorns in pierced silver-gilt. The purse, with the notebook inside, is said to have been found concealed in a stable at Whitburgh, near Soutra, Midlothian.

(2) By Rev. Canon W. Greenwell, D.C.L., Hon. F.S.A. Scot., Durham.

Convex Disc of bronze, 5½ inches diameter, slightly convex, with central perforation and four loops at the back.

Large Cylindrical Armlet of bronze, 4 inches diameter and 2⅝ inches in breadth, one edge everted, the other ridged. Both these objects were found, with many other articles of bronze, gold, etc., in the Heathery Burn Cave, Durham, as described by Canon Greenwell in the *Archæologia*, vol. liv. p. 102, where two similar examples are figured.

(3) By Robert Lochead, 15 Charlotte Street, Leith.

Stone, 2 feet 6 inches by 1 foot 10 inches, with emblematic sculpture, and the inscription on a circular scroll, "VIRGINITAS ET UNITAS NOSTRAE FRATERNITAS," under the date 1720, in a triangular pediment, from Storey's Alley, Leith.

(4) By W. S. Geddie, Provost of Fortrose.

Casts in lead of the oval Seal of the Burgh of Fortrose and the circular Seal of the Chapter of the Cathedral of Ross. The Seal of the Burgh, which measures 3 inches by 1¾ inches, has in the central oval the figure of St Peter in canonical vestments, holding a key in the left hand, and the right hand uplifted in the attitude of benediction. The legend is SIGILLVM COMVNE BVRGI DE ROSMARKYN, but blundered by the substitution of s for o in the second word. The chapter seal is 1⅞ inches in diameter, and has in the centre the figures of St Peter and

St Boniface, with the inscription round the edge S' CAPITVLI SANCTORVM PETRI ET BONEFACII DE ROSMARKIN.

(5) By Dr SHARPE, Ollaberry, Lerwick.

Cinerary Urn of steatitic clay, $8\frac{1}{2}$ inches in height, and the same in diameter at the mouth, tapering to a base of $3\frac{3}{4}$ inches diameter, found at Nissetter, Gluss Voe, Shetland.

(6) By the MASTER OF THE ROLLS.

Calendar of State Papers, Venice, vol. xi., 1607–1680; Acts of the Privy Council, New Series, vol. xxviii.; Calendar of Inquisitions, Henry III., vol. i.: Year-Books of Edward III., year 18; Calendar of Patent Rolls, Edward II., vol. iv., 1321–24, and vol. v., 1324–27; Calendar of Treasury Books, vol. i., 1660–67: Calendar of Papal Registers—Papal Letters, 1404–15; Calendar of State Papers—Foreign, 1579–80; Domestic, 1673–75; Colonial, 1696–97.

(7) By the ROYAL SOCIETY OF NORTHERN ANTIQUARIES, Copenhagen.

De Danske Runemindesmaerker af L. F. A. Wimmer, vol. iv. part i.

(8) By DAVID MURRAY, LL.D., F.S.A. Scot., the Author.

Museums, their History and their Use, with a Bibliography and List of Museums in the United Kingdom. 3 vols. 8vo. 1904.

(9) By Sir ARCHIBALD CAMPBELL LAWRIE.

Early Scottish Charters, prior to A.D. 1153. Collected with Notes and an Index. By Sir Archibald C. Lawrie. 8vo. 1905.

(10) By GEORGE MACKAY, M.D.

Ancient Gaelic Medical Manuscripts—an Article in the Caledonian Medical Journal, vol. vi., No. 2, October 1904.

There were also exhibited :—

By Col. MALCOLM, C.B., of Poltalloch.

Seven Sepulchral Urns and three portions of Urns, found on his estate of Poltalloch, Argyllshire. [See the subsequent Communication by Dr Joseph Anderson.]

The following Communications were read :—

I.

REPORT ON EXCAVATIONS AT FETHALAND AND TROWIE KNOWE, SHETLAND; AND OF THE EXPLORATION OF A CAIRN ON DUMGLOW, ONE OF THE CLEISH HILLS, KINROSS-SHIRE. BY THE HON. JOHN ABERCROMBY, SECRETARY.

Fethaland.—On the 4th of June 1904 I paid a preliminary visit to Fethaland to inspect a site which Mr R. Haldane believed to be the ruins of a broch. The Isle of Fethaland is now connected with the Mainland by a neck of rough, shingly beach, 350 feet wide, and at the highest tides in rough weather this narrow strip is nearly swept by the sea. At a short distance to the east of the neck is a low grassy mound on slightly rising ground, surrounded on all sides, except to the north, by higher and rocky ground. This mound, about 5 feet high at the most, had the appearance of a very much ruined broch, or analogous structure. Close to it on the south side, and also on the other side of the neck, there are fully a dozen houses, the remains of a fishing village which formerly existed here. About fifty years ago several hundred persons inhabited this site and owned sixty boats, with an average crew of seven men. Twenty years ago the boats were reduced to forty, and now the village is entirely abandoned. The village, though not the mound, is marked on the 1-inch and 25-inch O.S. maps.

In the 12th volume of our *Proceedings*, page 203, in a communication to the Society, the Reverend G. Gordon incidentally mentions "the undoubted *broch of Feideland*" (Fethaland), and at page 206 Mr Cockburn is of the same opinion in this respect; both took the mound for the site of a broch.

Two men and a boy were engaged to excavate and clear out the mound, and I visited the site on the 12th, 13th, 16th and 18th June, but was not present during the whole time that the excavations were being conducted.

On removing the turf and clearing away the loose earth and rubbish the existing external wall was found to stand only a very few inches above the natural surface; it was completely razed to the ground. The outline of the structure, as will be seen on the plan (fig. 1), is far from circular, and seems a good deal damaged on the south side, near the entrance. Its greatest length measures 49 feet and its greatest width 37 feet. At A on the plan there is a slightly curved chamber 11 feet long by $3\frac{1}{4}$ feet wide, with an entrance $3\frac{1}{2}$ feet in breadth. At the west end of the chamber is a step about 3 inches higher than the rest of the floor. At B there are also remains of a curved chamber 6 feet by $3\frac{1}{4}$ feet, nearly closed at the south end by an upright slab 3 feet long. Between the outer edge of the slab and the inside of the outer wall is 10 inches. At C there seemed to be the remains of a beehive hut, as the walls on the north side, which are still 3 feet 4 inches high, are not vertical, but project a little forwards. The large stone to the right of C is 2 feet 2 inches long and 3 feet high. At present the highest part of the ruined structure lies between C and the paved road to the north, and there are indications that something more would be found by continuing the excavation in that direction.

The recess D, which seems to have been used as a fireplace, as quantities of ashes were found there, is formed by three slabs: that to the north is 31 inches high, that to the west 34 inches high, and that to the south only 18 inches in height. Its prolongation westwards, marked F, shows a row of horizontally placed slabs, extending for about

7 feet, and about $2\frac{3}{4}$ feet wide. They look like the roof of a drain or narrow passage, which on a future occasion it might be advisable to open up.

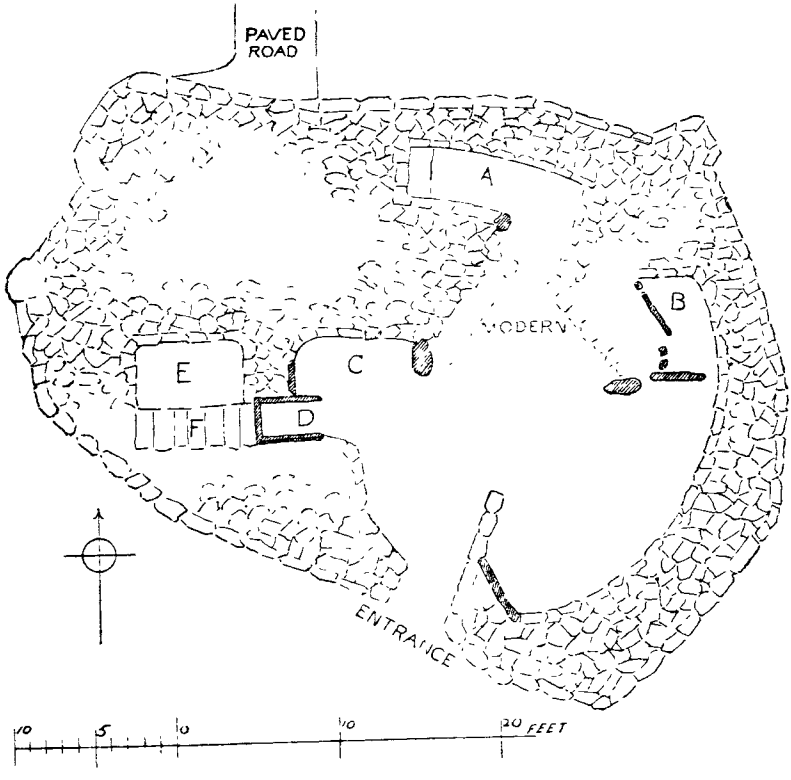


Fig. 1. Ground-plan of Structure at Fethaland.

At E there is a rectangular depression $6\frac{1}{2}$ feet by 4 feet; on the north side the height of the wall is 34 inches, on the east 30 inches.

Close to the north-west corner of the structure is a paved road, or perhaps the foundation of a wall, 5 feet wide, leading due north, and covered with turf, but I only followed it for a few feet.

The present entrance is about 4 feet wide, but this is the most dilapidated part of the ruins, and here the structure has suffered most from the hand of man. The entrance leads straight to a rectangular foundation of modern date, the site of a fisherman's house. In clearing out the angle now remaining were found ashes, a piece of a clay tobacco-pipe, a No. 6 steel fishhook, and a few links of an iron anchor-chain.

The other objects found during the excavations are all more or less fragmentary and of no special interest, as the workmanship is so rough and incomplete.

A small stone rectangular receptacle, 5 inches by 3 inches, with two lateral projections at one end. The measurement of the very rudely excavated hollow is 3 inches by $1\frac{5}{8}$ inches, by $\frac{3}{4}$ inch deep.

Small segment of a circular steatite bowl, $\frac{7}{8}$ inch deep. The bottom of a steatite vessel, hollowed out of a rough untrimmed block; the workmanship very rude. Half of a rough block of steatite, $10\frac{1}{2}$ inches long, hollowed on one side into a bowl-shaped depression $2\frac{1}{4}$ inches deep

A small piece of steatite, squared on three sides, about $3\frac{1}{4}$ inches square, which seems to form part of a receptacle. It is slightly hollowed on one side by means of a tool, leaving very deep impressions.

Twelve fragments of steatite vessels showing segments of hollowed surfaces rudely picked into the face of the stone.

Fragment of a side of a steatite vessel, with flat bottom and smooth thin sides, of far better make and finish than the above fragments. It measures $3\frac{1}{2}$ inches by 3 inches.

Eight small fragments of plain, fairly hard, but hand-made pottery, the paste of which contains much mica. One of the pieces shows a flat bottom.

A roughly circular net-sinker, made from a beach stone, with a diameter of $6\frac{1}{2}$ inches, and with two perforations, a larger one at the centre and a smaller near the edge.

A net-sinker of slaty stone, $7\frac{1}{2}$ inches by 5 inches, of irregular shape, and perforated near the centre.

A nearly circular pestle of hard, heavy, waterworn stone, $7\frac{1}{2}$ inches long, with a diameter of about $2\frac{3}{4}$ inches, showing signs of use at one end. The other end is broken.

The lower end of a natural stone used as a small pestle. It is 4 inches long, of oval section, $2\frac{1}{4}$ inches by $1\frac{1}{2}$ inches. One end has been broken off.

A few bones of animals, the tooth of a small ox, and quantities of white whelks and limpets, were also found in excavating the site.

Trowie Knowe.—About half a mile north of Lochend, North Roe, Shetland, at the foot of the South Beorgs, on the property of R. C. Haldane, Esq., there is a sepulchral cairn known as the Trowie Knowe, —Trow being the Shetland form of the Scandinavian word Troll. On the Ordnance Survey map it is called the Giant's Grave, but this term, properly speaking, applies to two adjoining standing stones.

The cairn lies on a natural rise in the ground of low elevation, and has a diameter of 27 feet with a height of about 5 feet. When I saw it, it had been previously opened, partly by Mr Haldane after Dr Robert Munro's visit last year, and partly by a predecessor. Many stones, too, had been removed from it a few years ago, when the road to North Roe, which runs about 50 yards to the east of it, was constructed.

When I attacked the cairn on 2nd June 1904 the walls of the west chamber A (fig. 2) were exposed, but the floor was still covered with large stones. On removing these, I found the axis of the chamber lay due west (magnetic): its greatest length was 6 feet 4 inches, its greatest width 4 feet: the narrowest part measured 1 foot 10 inches, and the height from the floor to the roof, of which only a very small portion remained, was 4 feet 3 inches. The north and south walls of the chamber (fig. 3) were each composed of one huge stone (*a* and *b* on the plan). That on the north side (*a*, *a*) measured at least 6 feet 3 inches by 5 feet 1 inch: the dimensions of the other could not be measured, as the ends were concealed. The northern

stone was upright, but the other one was sloped at an angle of about 45°, so that the upper edge of it nearly touched the northern stone at the west end of the chamber. Here one lintel stone of the roof, covering a length of 1 foot 10 inches, remained in position: all the others had fallen in.

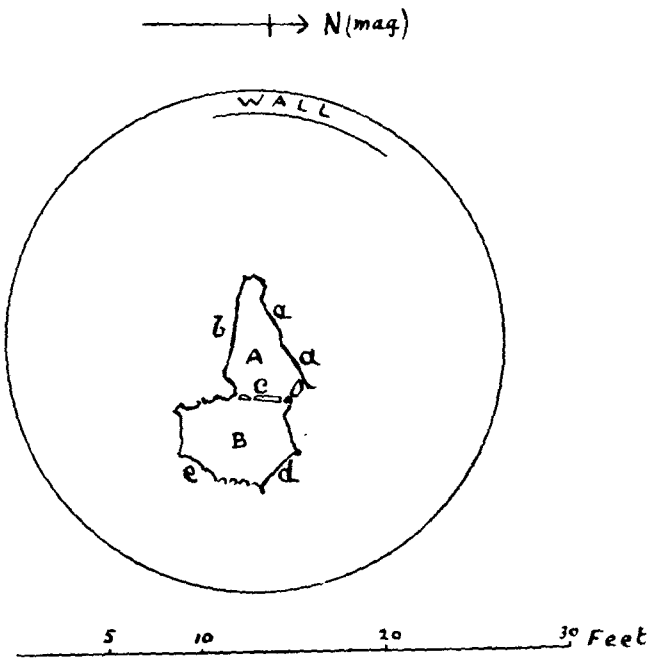


Fig. 2. Ground-plan, Trowie Knowe.

I am inclined to believe that these two stones were there before the chamber was constructed, and that their convenient position suggested the idea of utilising them to form a place of sepulchre, for no other stones in the cairn approached these in magnitude.

Near the bottom of the chamber were three flat stones, which probably formed part of the floor, lying in a grey-coloured mud, for

the bottom was very wet. Below the stones was a quantity of black mud. When dry, both kinds of mud were examined, and some of it was found to be very light in weight and to contain small pieces of charcoal. The only objects found in the chamber, and at a rather higher level than the mud, were two smooth beach pebbles of eruptive



Fig. 3. The West Chamber (A), Trowie Knowe.

rock, like brecciated lava, beautifully spotted and striated: one has a long diameter of 3 inches, the other of $2\frac{1}{2}$ inches. The workmen informed me that no pebbles like them were to be found on the beach at Lochend, but Mr Haldane has seen similar ones at Uyea, about 7 miles to the north-west.

The thin, low septal stones, marked C, about $2\frac{1}{2}$ feet high, at the

east end of the chamber, suggested that another one lay to the east. This proved to be correct, for on removing the stones that filled it another chamber, B, roughly pentagonal in shape, was disclosed. It measured 4 feet 10 inches in length, with a maximum width of 6 feet. The two largest stones, marked D E, measured respectively



Fig. 4. Retaining-wall at west end of Trowie Knowe.

4 feet 2 inches in height by $2\frac{1}{2}$ feet in width, and 4 feet 2 inches in height by 2 feet 5 inches in breadth. This chamber was paved with flat stones, but nothing save a beach pebble was found in it.

On removing the peaty covering of the cairn, at a distance of 10 feet 10 inches west of the back of the chamber A, a well-built retaining-wall (fig. 4), fully 2 feet high and 1 foot 3 inches thick, in two tiers

of dry masonry, was found, and traced round the northern half of the cairn. The stones between this wall and the megaliths of the chamber had evidently been thrown in promiscuously, as they lay in all directions and had not been placed methodically.

Cairn on Dumglow.—One of the isolated summits of the Cleish Hills that run along the southern edge of the county of Kinross is known as Dumglow, with an altitude of 1242 feet above the sea-level. Its southern face rises precipitously above the small Black Loch, and a little to the east of this lies the considerably larger Loch Glow. The hill of Dumglow, or Dunglow, on which may be seen traces of an ancient British earthwork, lies on the estate of Cleish Castle, the property of Mr W. Young, but rented to Mr William Stuart.

In the summer of 1903, when I happened to be on the top of the hill with Mr Stuart, I noticed what looked like a cairn or sepulchral mound. Having in the meantime obtained the requisite permission from the proprietor, on Saturday, 17th September 1904, I proceeded, in company with Mr Stuart and two workmen, to cut a trench across the mound.

The cairn has a diameter of 50 feet, with a height of about 5½ feet, and operations were begun by cutting a trench (fig. 5) across it from east to west. From its commanding position it has happened that on great occasions, such as that of the King's coronation, bonfires have been kindled on the top of the mound. It was not surprising, therefore, to find great pieces of charred wood and iron hoops of tar-barrels on the summit. For some feet down the earth was reddened by the heat of the fires, and molten tar and the melted glass of whisky-bottles had penetrated to considerable depths.

Externally, the mound had the aspect of a cairn, as it was cased all over with stones of moderate size, but below the stony surface the interior was largely composed of earth, much of it of a clayey nature, mixed with stones. At the east end of the excavation nothing was found, but at a distance of 23¼ feet from this end, at a depth of 2 feet 7 inches,

a piece of melted glass was picked up. On approaching the centre of the mound, at about the natural level of the ground, this part of the trench began to fill with surface water, owing to the clayey, retentive nature of the soil. At the centre, at a depth of 6 feet 7 inches from the top of the cairn, what seemed to be a plank of wood or trunk of a tree, lying in a direction parallel with the trench, was felt by hand 2 or 3 inches below the muddy water. When extracted it was



Fig. 5. Trench through the Cairn on Dumglow.

found to be part of a hollowed-out tree-trunk of oak, measuring 7 feet 1 inch by 11 inches at the broadest part. But one end was certainly missing, and a good deal of the wood had decayed away. On the same level as the east end of the tree-trunk, a piece of slightly iridescent glass of modern date was picked up, and a smaller bit of dark bottle-glass.

This finished the work for the day, and operations were only resumed on Saturday, 1st October, by which time the water in the

excavation had disappeared. Shortly before Mr Stuart and I arrived on the spot, the two workmen had found, about 3 feet north of the centre, and at a depth of 6 feet 9 inches, a small, perforated, lathe-turned disc of wood, with a diameter of $2\frac{5}{8}$ inches, like the wheel of a child's trolly-cart. The diameter of the hole is 1 inch, and the thickness of the disc $1\frac{3}{5}$ of an inch. It is evidently quite modern, and may easily have fallen in from near the surface, as, before knocking off work on the 17th, the excavation had been partly filled in, lest any of the sheep grazing on the moor should receive damage by falling into it. At a depth of about 7 feet we came upon the bed rock. The excavation at the centre was enlarged to cover a space of $10\frac{1}{2}$ feet square, and carried down to the underlying rock, without finding anything. The surface of bed rock was uneven: on the south side of the excavation it formed a sort of shelf or natural raised step, and the tree-trunk had been deposited on the lower level to the north of the step, which thus partly protected it.

Although it is not quite certain, it is highly probable that under the Dumglow mound we have an instance of tree-coffin burial. Dr Joseph Anderson has kindly drawn my attention to two Scottish examples of this practice. In the *New Statistical Account for Aberdeenshire* (xii. 354), the Rev. W. Donald, of Peterhead, records the finding in the parish of Longside of two oak coffins or chests in a tumulus of moss. One of them was entire. They had been hollowed out of solid trees, and each measured 7 feet by 2 feet. The sides were parallel and the ends rounded, and they had two projecting knobs to facilitate their carriage. No vestige of bones was found in either coffin. They had been covered over with slabs of wood, and lay east and west.

In dimensions, material, and orientation, these tree-coffins from Aberdeenshire agree very well with that from Kinross-shire.

In the other reference (*P.S.A.S.*, xiii. 336–8), the Rev. J. Mapleton describes the finding in a peat-bog near Oban, at a depth of 4 feet of made ground, of a roughly hollowed-out trunk of a tree, 5 feet $9\frac{1}{2}$ inches long by 2 feet wide and 1 foot 7 inches deep, of which a representation is given in fig. 6. It lay north and south, and was taken by

Mr Mapleton for a canoe. No signs of bones were noticed in it and no implements. Logs were placed lengthways along each side (the "gunwale") of the tree-trunk, and these were kept in place by stakes, the intervals between being stuffed with moss. The outside measurements of the structure were 7½ feet by 2 feet, with a height of 2 feet 3 inches. The cover had been formed of branches of birch and hazel, and stuffed with moss.

Sir Richard Colt Hoare gives four examples of tree-coffin interments with skeletons, and six in which the body had been first cremated, but

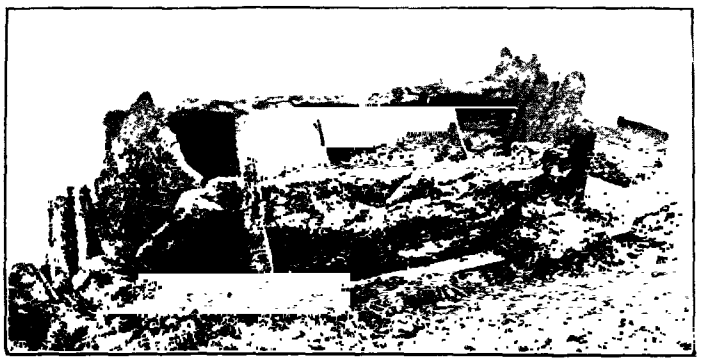


Fig. 6. Coffin of the trunk of a hollowed oak, found (1878) at Dalrigh, Oban.

these latter may be passed over. In every case objects had been laid in the grave which help to determine the age of each.

Near Warminster, in a large barrow 13 feet high, he found, at a depth of 5 feet, remains of a skeleton, deposited nearly east and west, in a wooden box or trunk of a tree. Among the bones was a small bronze dagger. On the floor of the barrow, a few feet from the centre, was a cinerary urn, now lost, standing upright, containing burnt bones (*Anc. Wilts*, i. 52). This interment probably belongs to a latish period in the Bronze Age.

Near Amesbury, in a large barrow 15 feet high, he found at the centre, on the natural level, a shallow oblong excavation, in which was a rude trunk

of elm, containing a skeleton, with its head to the north-east. Near the head was a beautiful red urn, with five handles on the neck, apparently turned on the lathe; near the breast lay a bronze dagger, $8\frac{1}{2}$ inches by $2\frac{1}{2}$ inches, and a bronze awl, $2\frac{1}{4}$ inches long, with a bone handle; near the thigh lay another bronze dagger with four rivets, measuring $8\frac{1}{2}$ inches by 2 inches (*op. cit.*, i. 122–3). All these objects are now in the Devizes Museum. If the urn is really turned on the wheel it must belong to a late portion of the Bronze Age; it is figured by Thurnam (*Archæologia*, vol. lxiii., pl. 29, fig. 3), and compared by him to a jar for holding preserved ginger.

In the same district as the above, in a large barrow $9\frac{1}{2}$ feet high, Hoare found, in an oblong excavation at the natural level, a shallow wooden case of boat-like form, containing a skeleton, lying north and south. With it was a necklace of jet and amber beads, a knife-dagger and awl of bronze, and a small urn of neat form (*op. cit.*, i. 124–5).

In a barrow at Overton Hill he found, at a depth of 10 feet, a skeleton in an excavation in the native chalk. The skeleton was in a contracted position, with the head to the east; near it was a small knife-dagger, an awl and a little celt, all of bronze. The skeleton seems to have been inclosed in the trunk of a tree (*op. cit.*, 90). If the little celt was flat or slightly flanged—it seems to be lost—this interment must belong to an early period of the Bronze Age.

Canon Greenwell (*Brit. Barrows*, pp. 375–6) found in the parish of Rylston, West Riding, under a barrow 5 feet high, a coffin formed from the trunk of an oak split in two and hollowed out. It was $7\frac{1}{4}$ feet by 1 foot 11 inches wide; the trunk had been cut off at each end and then partially rounded, but on the outside it was left in its natural condition. The hollow within was $6\frac{1}{2}$ feet by 1 foot wide, roughly hewn out, and showing marks of the tool. It was laid north and south, with the thicker end to the south. The body had entirely decayed, and nothing was observed but an unctuous substance of animal origin. The corpse had been enveloped in a woollen fabric reaching from head to foot. Canon Greenwell believes the interment belongs to the Bronze Age

and at p. 377, in a note, gives a few additional references relating to tree-coffins in this country and in Denmark.

In *Cranio Britannica* is figured a coffin made from the trunk of a large oak split in two. It was found in a barrow at Gristhorpe, North Riding, in a grave from 6 to 7 feet deep, covered by a mound with a diameter of 40 feet and a height of 3 feet. The external measurements of the tree-coffin were $7\frac{1}{2}$ feet by $3\frac{1}{4}$ feet, but the interior length was only $5\frac{1}{3}$ feet. It contained the skeleton of an old man, and a bronze blade $3\frac{1}{2}$ inches long with two rivets, and the bone top of the handle. The body had been wrapped in skin, fastened at the breast by a bone pin 3 inches long.

II.

NOTICE OF TWO CINERARY URNS AND A PENDANT OF SLATE FOUND AT SEGGIECROOK, IN THE PARISH OF KENNETHMONT, ABERDEENSHIRE. By J. GRAHAM CALLANDER, F.S.A. Scot.

On the 16th of October last, while excavating material for mending roads, in a gravel-pit on the farm of Seggiecrook, in the parish of Kennethmont, Aberdeenshire, some roadmen exposed the rim of an urn, without, however, happening to notice it. Fortunately they stopped their work before the urn had got displaced or damaged, leaving it with the rim protruding from the face of the gravel, or rather decayed rock. That evening it was discovered by Mr Peter Gordon, son of the farmer, and by a friend who was along with him. They took great care in removing the vessel from the sand and gravel in which it was imbedded, and succeeded in getting it out intact, though badly cracked. Four days after the discovery of the first urn, and after the face of the gravel-pit had been further excavated, the workmen, at a distance of about 8 feet south-west of where the first urn was found, came upon a second urn, which had collapsed and was found to be in fragments.

In some parts of the pit the "rotten" rock comes right up to the layer

of surface soil, which has a depth of about 6 to 8 inches In other parts the rock has become disintegrated to the consistency of rough sand to a depth of 2 feet under the soil, and it was in the rough sand that both urns had been buried. The pocket for No. 1 had been excavated right through this sand and about 6 inches into the "rotten" rock, the depth from the surface of the soil to the bottom of the pocket where the urn rested being about 3 feet. Urn No. 2 was found at about the same depth. The material immediately surrounding both urns was noticed to be darker in colour than the mass of the gravel in the pit, so much so, that, when approaching the place where the second urn was deposited, and before any of the fragments of it were exposed, the workmen suspected its presence from the darkness of the sand.

Both urns are of the cinerary type. Urn No. 1, which was found standing upright on its base, was filled nearly to the brim with burnt human bones, fragments of the skull, leg-, and finger-bones being recognisable. Among the bones were found several pieces of flint, calcined and turned white by the action of fire. One of the pieces shows signs of having been flaked, and looks as if it had been a scraper. There was no appearance of the mouth of the urn having been furnished with a lid or cover. The mouth was covered simply with gravel, which rested on the burnt bones. The same day, after the urn had been removed, and before anyone had disturbed the place where it had been found, Mr Gordon returned to the place, and using his pocket-knife he carefully picked away the bottom and sides of the pocket in which the urn had sat, in the hope that some relic might be found. At a depth of about an inch under the place where the urn had rested, a small thin pendant of slate (fig. 1), ornamented and perforated, was discovered. Mr Gordon could not say whether this object had been originally placed in the bottom, or whether it had fallen down from the walls of the pocket, but there is no doubt that it had been deposited in the material immediately surrounding the urn. It is roughly oblong in shape, with rounded corners, and is perforated at each of the two corners adjoining one of the long sides. If this object were suspended for wear

its longer axis would assume a horizontal position. The object measures $1\frac{1}{2}\frac{5}{2}$ inches on its greater length and $1\frac{5}{16}$ inches along the top and bottom edges. It is $\frac{2}{3}\frac{9}{2}$ inch in breadth and $\frac{1}{8}$ inch in thickness. The holes are countersunk from both sides, are $1\frac{1}{16}$ inches apart from centre to centre, and measure $\frac{1}{16}$ inch at their narrowest diameter. The object is ornamented on the face, and the back is plain. The ornamentation is composed of two lines drawn roughly parallel to, and at distances of about $\frac{1}{16}$ and $\frac{1}{8}$ inch from, three of the sides; on the fourth there is a single line.

Urn No. 2 had probably (like its companion) contained burnt bones, small pieces of which were noticed amongst the fragments of pottery and the blackened earth where the urn had sat. Unfortunately the greater number of the fragments of the urn were carted away with the gravel.

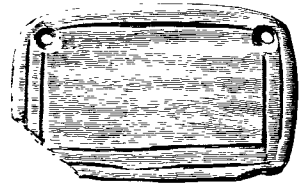


Fig. 1 Pendant of slate found under urn No. 1. ($\frac{1}{1}$.)

When I visited the site a few days after the discovery I was able to secure some small pieces. I also noticed many small bits of charred wood lying about, as well as some particles of burnt bones.

Urn No. 1 (fig. 2) belongs to the type of cinerary urn in which the heavy overhanging upper part is absent. It is of a light yellowish-brown colour, except a part of the inside which is coloured black. The vessel is made of a rough paste of sandy clay mixed with broken bits of stone. It is rather under the average size of cinerary urns, being $9\frac{1}{4}$ inches in height, from $6\frac{3}{4}$ to 7 inches in diameter across the mouth, $7\frac{3}{4}$ inches at its greatest breadth, and $4\frac{3}{8}$ inches across the base. The thickness of the walls is $\frac{5}{16}$ inch and that of the bottom $\frac{3}{4}$ inch. The rim is $\frac{1}{2}$ inch broad. The urn is in the form of two truncated cones placed base to

base. The two portions join at a point at about two-thirds up the wall of the urn, where the junction is emphasised by the presence of a rounded and slightly raised moulding about $\frac{1}{4}$ inch in breadth and about $\frac{1}{8}$ inch in height. Below the moulding the urn tapers towards the base, flower-pot-like, for a distance of $6\frac{5}{8}$ inches, and this part is quite devoid of ornament. Above the moulding the urn narrows, but at a less angle than the lower part, for a distance of 3 inches to the lip.



Fig. 2. Cinerary Urn (No. 1).

This portion is covered by a broad band of ornament $2\frac{5}{8}$ inches in breadth, composed of crossed oblique lines contained within two lines encircling the urn, one $\frac{5}{16}$ inch below the rim and the other the same distance above the moulding. The rim, which is angled downwards towards the inside of the urn, is decorated with a series of crossed lines, forming a continuous band of diamonds or lozenges about $\frac{3}{8}$ inch long and $\frac{1}{4}$ inch broad. All the lines of decoration on the urn have been

drawn with a pointed tool while the clay was soft, and it is apparent that the urn was held upright during this process, as all the lines other than the horizontal ones have been drawn downwards. The potter has been careful, when commencing to draw the lines, to start exactly on the upper horizontal line, with the strokes slanting both to the right and to the left, so that while the lines always meet on the upper line at an angle, yet the intersection of them at the foot is seldom on the lower line, and consequently they often do not end in an angle. From the intersections of the lines it is seen that those slanting to the right were drawn first. Seeing that the urn had been held upright when the lines of ornamentation were being drawn, it is quite evident, from the slant at which the strokes cut into the outer skin of the vessel, that the artist must have been right-handed. The crossed lines occur at irregular intervals, some being $\frac{1}{2}$ inch and others $\frac{1}{4}$ inch apart. They are drawn at such angles as sometimes to form three lozenges and sometimes two complete lozenges and a half of a lozenge between the upper and lower inclosing horizontal lines.

The recovered fragments of urn No. 2 are so few and so small that it is impossible to restore the vessel. However, several parts of the rim and walls allow of some of the dimensions and decorative features being ascertained. Apparently the urn had somewhat resembled urn No. 1 both in size and in the scheme of ornamentation. Its mouth, judging from the arc of the circle formed by the remaining fragments of the lip, was of nearly the same size as that of urn No. 1. The rim was of the same angled type, dipping towards the inside, and was of the same thickness—$\frac{1}{2}$ inch. The walls of the urn were the same thickness—$\frac{5}{16}$ inch; and it has been encircled by at least one raised and rounded moulding of the same dimensions as the moulding on urn No. 1. The ornamentation on the parts recovered has been impressed on the soft clay with a twisted cord of two strands, possibly formed from grass or hay. The urn has been encircled, at a distance of $\frac{1}{4}$ inch from the rim, by two lines close to each other, and the band of ornament below this was composed of oblique crossed lines $\frac{1}{2}$ inch apart, forming lozenges

about $\frac{3}{4}$ inch long and $\frac{1}{2}$ inch broad. The twisted cord has been impressed on the moulding encircling the urn, and also in the centre of the rim going round the mouth of the vessel, where it has been crossed with short lines slanting from left to right about $\frac{1}{4}$ to $\frac{3}{8}$ inch apart.

Since this was written a third cinerary urn was found, two or three feet from urn No. 2. Unfortunately its fragments were removed with the gravel, but charcoal and burnt bones were noticed.

The site of these interments, which lies a little above the 700-feet contour-line, is on the eastern slope of the ridge of a hill which rises towards the north. The hill is under cultivation, and the site of the burials is about 200 or 300 yards from the top of the ridge. There were no signs above ground of any interments. As in each case the top of the urn was more than a foot under the deepest furrow that could be made by a plough, the burials would probably never have been revealed by agricultural operations. No doubt many such burials have taken place throughout the whole country, and will only be brought to light by unusually deep excavatory work. Nearly a mile to the south of the burials, on the west, north, and east sides of the Bin Hill, Leslie, there are marked, on the Ordnance Survey map, "Site of Tumuli," "Supposed Cromlech," and four times "Site of Cairn." All these remains would probably be swept away when the land was being trenched preparatory to cultivation.

The Society is indebted to C. E. N. Leith-Hay, Esq., of Rannes and Leith-Hall, for kindly allowing the relics to be exhibited.

It may be well to record here that the sculptured stone formerly at Newbigging, Leslie,[1] has been removed by Mr Leith-Hay to the policies adjoining Leith-Hall, for better protection and preservation.

Another sculptured stone, the one which was formerly at North Redhill,[2] has been removed by Lt.-Col. Foster Forbes of Rothiemay, to Rothiemay Castle, and re-erected close to the castle for safety.

[1] Described and figured in *Early Christian Monuments*, p. 177, fig. 192.

[2] *Ibid.*, p. 154, fig. 161.

III.

RECORD OF THE EXCAVATION OF TWO STONE CIRCLES IN KINCARDINESHIRE—(1) IN GARROL WOOD, DURRIS; (2) IN GLASSEL WOOD, BANCHORY-TERNAN: AND (II.) REPORT ON STONE CIRCLES IN ABERDEENSHIRE, WITH MEASURED PLANS AND DRAWINGS; OBTAINED UNDER THE GUNNING FELLOWSHIP. By FRED R. COLES, Assistant Keeper of the Museum.

During the spring of last year it was suggested to me by the Hon. J. Abercromby that some excavations might be made within a few of the Stone Circles of which I had prepared plans and drawings. I therefore put myself into communication with several of the proprietors on whose estates the Circles stand, with the view of obtaining permission to excavate. In some instances consent was readily and courteously given. Out of three exceptionally eligible sites, viz., Tomnagorn, belonging to Lady Gordon Cathcart of Cluny: Loanhead of Daviot, on the lands of Major Seton; and Garrol Wood, Durris, which lies near the western boundary of the superbly wooded estate owned by H. R. Baird, Esq., the last was chosen. The selection was made mainly because the site is the most southerly of all the sites in Kincardineshire likely to yield interesting results. Grateful acknowledgments are due to the proprietor for his permission to excavate; to Mr A. Macdonald, of Durris School, through whose interest in, and knowledge of, the general antiquities of the district I was led to approach Mr Braid the factor, and to Mr Braid himself, who most heartily seconded my efforts by obtaining the desired permission, selecting workmen, getting the Circle-area cleared of trees and undergrowth, and supplying tools and implements according to my directions.[1]

Excavation of Garrol Wood Circle.—The site is near the western limit of the wood covering Mullach Hill, and at the altitude of close

[1] The forester, Mr Crosier, and the three excellent workmen, William Maccallum, Alexander Marshall, and James Marshall, did all in their power to render the investigation complete and trustworthy.

upon 800 feet above sea-level. Formerly the Circle would most probably be visible for a considerable distance in several directions. In many parts of the planted portion of the hill great granite and whinstone boulders lie conspicuously above the ground, and there seem to be indications of a general stoniness also in many directions.

Operations were begun on Monday, September 5th, and occupied my band of observers daily until Saturday the 17th. Having already my own ground-plan of the Circle to work from, I came to the spot provided with four sketch-plans, each sheet showing an area representing on the ground 30 feet by 24. Every sheet was so lined off in connection with the rest that when the investigation was complete, and the four sheets placed edge to edge, the detailed results on the ground-plan were at once discernible.

The object I kept in view was to unearth the Circle in sections, squared off by lines of posts which we drove into the ground at points already measured to scale on the ground-plan sheets. We dug no trenches and used no pickaxes.[1] Every stone that was obviously not a part of the structure—and there was a vast quantity of stones there naturally as well as a great deal of structure—was levered up and overturned, and in all cases where an apparent "setting" of stones was laid bare we dug within these always down to the hard, gritty, yellow subsoil, in order to be quite certain that no isolated deposit was overlooked. The men were instructed to be most careful not to move any stones that were earth-fast or appeared to be part of an alignment of stones, wheresoever such might be found; and this rule was faithfully kept to throughout the whole excavation.

While the men were clearing the ground of the superincumbent small stones, peaty soil, roots, and other obstacles, we set out a new plan of the Circle, the plan previously made,[2] when the trees stood dense all

[1] The tramp-pick used in the North, and, to the best of my knowledge, unknown in the South of Scotland, is a much more manageable and efficient implement than the pickaxe. A large portion of the excavation was done with trowels.

[2] See *Proceedings*, vol. xxxiv. p. 158.

over the site, not being sufficiently accurate. To a post vertically fixed behind, *i.e.* outside of the Recumbent Stone, at the middle of its length, a strong cord was attached at a point level with the summit of this Stone. It was then carried forward due north and fastened to another post at the same level and near the centre of the Circle. Lastly, it was made fast to another post in line with the other two, at a point 15 inches west of the western outer edge of the North Stone. This correct north and south line served the double purpose of keeping the bearings of the general contour of the Circle accurately in view, and acted afterwards as a datum-line from which all sectional measurements were made. When carefully measured, we ascertained this line to be 51 feet 2 inches in length. The opposite axis, due east and west, lies between a point 3 feet south of Stone II. and a point 7 feet 3 inches north of Stone VIII. It measures 63 feet 6 inches, an increase of 12 feet 4 inches over the first diameter. To these points of difference reference will afterwards be made.

At the outset, it must be borne in mind that the whole area within the great Standing Stones was extremely stony: towards the centre this stony accumulation was doubtless the low cairn formed by those who had placed their interments here, but in the other portions natural causes had formed it.

The complete ground-plan (fig. 1) shows the results obtained at the conclusion of the entire excavation, on the scale of 16½ feet to 1 inch. Several of its detailed features are also shown in the illustrations (figs. 4–6), reproduced from photographs taken by Mr Turner, of Banchory, and Mr James Ritchie.[1]

The mere order in which discoveries were made being, as I think, insignificant, I shall begin by describing everything as from the nominal centre of the Circle, viz., at a point 19 feet 2 inches north of the

[1] Mr Ritchie, of Port Elphinstone School, a corresponding member of the Society, merits a special word of thanks for the keen interest he has long displayed in photographing the Circles and the Sculptured Stones of Scotland. His photographs rank quite among the very finest things of their kind.

outside edge of the Recumbent Stone. This point was the upper surface of the gritty granitic rock which was encountered nearly throughout the excavated area. It was at the depth of 4 feet 7 inches below the level of the top of the Recumbent Stone (see the lower section, fig. 2). Round it were found six small slabs of granite,

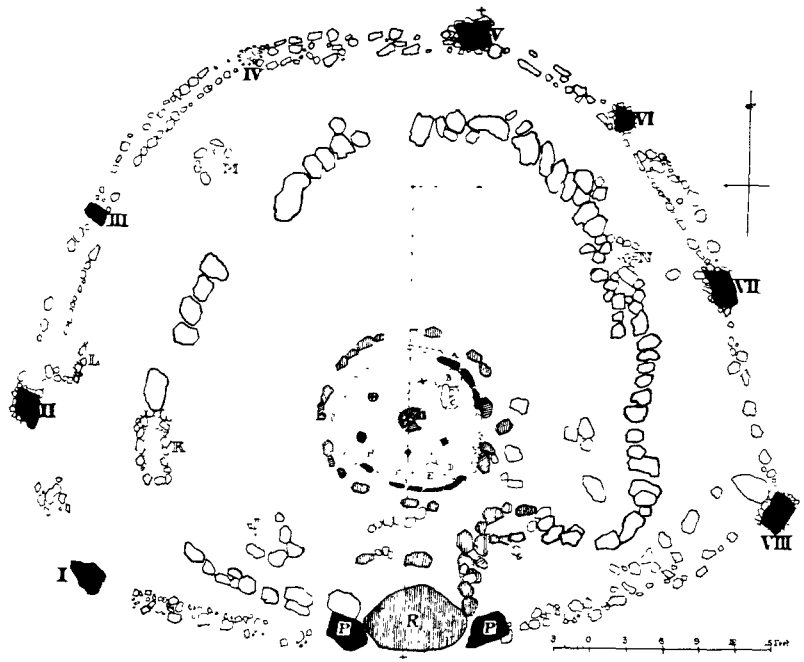


Fig. 1 Garrol Wood Circle : Ground-plan.

rudely wedge-shaped, set round a cavity scooped out of the subsoil, with their edges contiguous, so as to form a funnel-shaped pit, which measured 2 feet 2 inches in diameter across the mouth, 10 inches in depth, and 4 inches across the base. This was full to the brim of comminuted burnt bones and fragments of charcoal. The gap on its S.E. shows where a seventh small slab had originally been placed. Almost due north of the pit, at the point marked on the plan with

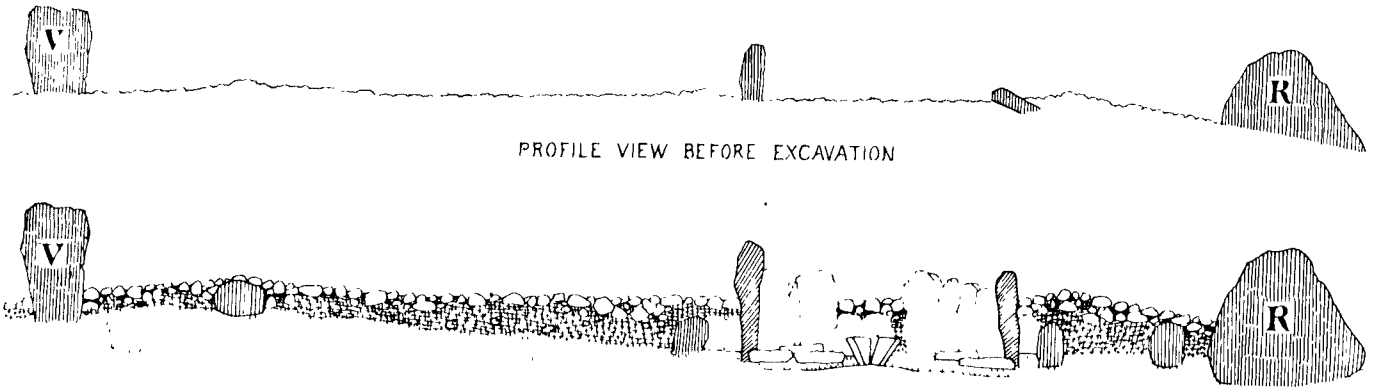


Fig. 2. Garrol Wood Circle; Sectional Views.

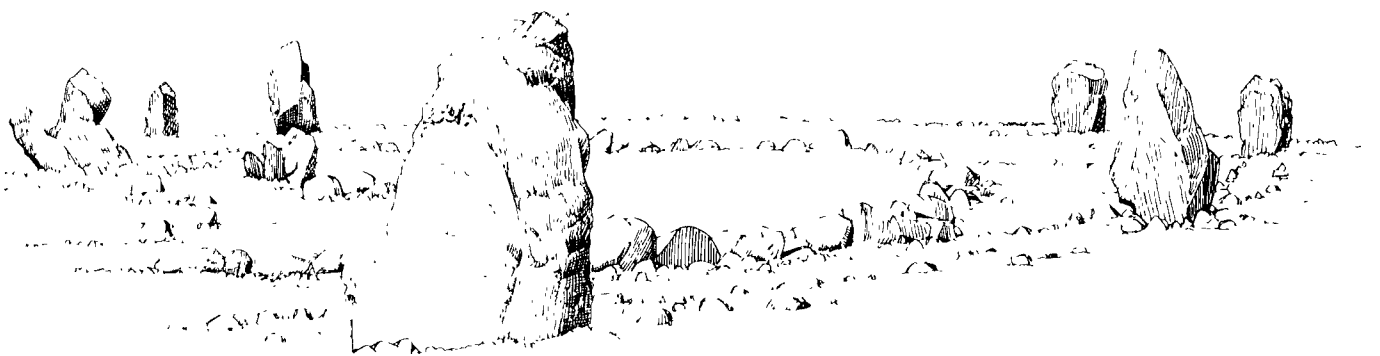


Fig. 3. Garrol Wood Circle; general View from the East.

a thick square cross, we found charcoal and several fragments of a rather coarse kind of pottery, presumably of an urn; the pieces are too small to be identified as those of any special type of sepulchral vessel, and are quite devoid of ornament. On the N.W. of the pit, marked on the plan with a barred hexagon, was a deposit of incinerated bones, resting upon a small thick slab of granite. At three other spots marked in black, the S.W., the S., and the S.E., there were also found similar deposits in shallow cavities scooped out of the subsoil, but without any stones either below or beside them.

None of these latter deposits was more than a few inches below the surface of the subsoil. The upper edges of the central pit were about flush with that surface, and the whole of this flattish central space, (dotted in the plan), measuring 12 feet 6 inches in diameter, was at a lower level than the edges of the thick squat stones (shaded on the plan) which inclosed it. The trowelling out of all the soil from this central flat space, and its subsequent riddling through two sieves, occupied us for the better part of two days, and it may therefore be held to be exhaustive.

Near to the inner faces of these thick earth-fast stones there were, at A and at D, long, fairly thick, flat slabs; that at A quite vertical, the other at D sloping into the ground outside.[1] On removing the mould and the low mound of small stones accumulated here, the two large, broad, flat stones B and C were discovered, and, not unnaturally, great interest was aroused by their extremely cist-like appearance. When they were both carefully levered up, there was nothing below but soil. Later, when the other similar slabs, E, F, G and H, were disclosed, the same absolutely negative result was obtained. Several of these stones, F and G in particular, bore evident signs of having lain beneath the mould for only a comparatively short period, for lichens and moss were visible, adhering to their broader edges. It seemed, therefore, just to conclude that, like the stones A and D,

[1] Both these stones are shown in my original plan; see *Proceedings*, vol. xxxiv. p. 158.

these other six stones had originally been set up as an innermost fence, as it were, their edges nearly touching, to the principal interments. I therefore had these stones reared up into what appeared to be their original positions; and the view (fig. 4) shows them thus in their "restored" sites. It also shows the central pit. In the plan, the bases of these eight stones are shown black; and the conjectural positions of the others, which doubtless completed this part of the structure, are given in thick dotted lines.

The ring of thick, short stones (shaded in plan) rose on the average about 13 inches above the subsoil; their line, also, was very incomplete; and all these features taken in conjunction confirm the early impressions of this Circle, that a good deal of disturbance must have once occurred, partly due to the planting of the site with the firs and to dike-building.

All the eight vertical slabs but one are of the "heathen" whinstone: the exception (Stone F) was a fine red granite. They were all of a pretty equal height and breadth, 3 feet 8 being the utmost height.

Roughly concentric with this central ring of stones, and at about 12 to 15 feet outside of it, there was unearthed a ring of great stones of all forms and dimensions; these are shown in thick outlines on the plan (see also the views from the N.W. and the E., figs. 5, 6). They varied in size from one on the N.W. arc, 4 feet 4 by 2 feet 2, to those on the extreme east, which average 2 feet in breadth. The majority were flattish, a few being bulky and rounded boulders. None was over 14 inches in height. It will be observed that this ring of boulders is broken by wide gaps at several points on its western semicircle. These, I think, indicate that the builders of the dike bounding the wood on the west removed many stones from this, the most convenient, part of the Circle; and this explanation of the gaps here also befits the broken-down condition of the two innermost rings just described.

The ring of flat boulders is continued on the S.S.W. arc till it ends in a broad thick slab which is wedged in underneath the base of the West Pillar (just visible in fig. 4). On the S.E. arc, the boulder-ring



Fig. 4. Garrol Wood Circle: View from North across centre. (From a Photograph by Mr Turner, Banchory.)

turns sharply and ends in an almost rectangular line where it joins the last of a row of massive stones placed due north between the East Pillar and the Recumbent Stone. These stones (shaded in the plan) are from 14 to 22 inches in height; two others of the same character and size are still *in situ* in front of the Recumbent Stone; but the corresponding angle on the west, if ever complete, is now devoid of any stone-setting. In connection with the boulder-ring and the space outside of it, six small spaces are shown dotted in the plan, J, K, L, M, N, Q. From the contours of their stone-settings, these were the most suggestive spots for possibly containing interments; and in each case the interior was carefully searched, every spadeful of soil being sifted, but without the discovery of any substances indicating deposits of a sepulchral nature. Several of the large stones of the boulder-ring were also lifted up and the soil below examined, and at the bases of each Standing Stone (I.–VIII.) the ground on all the four sides was dug into down to the subsoil, but in all cases with the same negative result. Careful examination and vertical measurements were also taken of all the Standing Stones still *in situ*, the details of which are appended in the subjoined table:—

Stone	I.	vertical height,	4 feet	11	inches.
,,	II.	,,	5 ,,	9	,,
,,	III. (broken)	,,	2 ,,	8	,,
,,	V.	,,	4 ,,	1	,,
,,	VI.	,,	3 ,,	11	,,
,,	VII.	,,	5 ,,	4	,,
,,	VIII.	,,	6 ,,	10	,,

The West Pillar measures to the surface of the subsoil on the inner face 6 feet 5 inches, but on the outer face quite 8 feet. The East Pillar, from its dangerously inclined position (see view, fig. 6), we had to leave unexplored.[1] In all the other cases, however, these vertical heights were

[1] It was arranged that none of the Standing Stones should be overthrown, or if overthrown by accident, the stone should be restored to its original position; and as heavy tackle would have been required for such re-erection I did not choose to run any risks with regard to this Stone.



Fig. 5. Garrol Wood Circle; View from the N.W. (From a Photograph by Mr James Ritchie.)

ascertained by digging actually beneath the one edge of the Stone and feeling its turning inwards, and the main result, therefore, relative to the depth of the setting of these stones is, that in no instance were their bases found to be more than 16 inches into the subsoil.

They were all well packed round with fragments of stone more or less angular, against which, as notably in the case of Stone VIII., a weighty boulder was sometimes placed.

Around the Recumbent Stone and the West Pillar, we removed a great quantity of small waterworn stones of all shapes and kinds before touching the accumulation of black mould upon which they lay. The highest portion of this heap of stones was about 6 feet distant from the inner edge of the Recumbent Stone, and its height was 2 feet 3 inches above the surface of the subsoil there (see the sectional views, fig. 2). At the outer side, the base of the Recumbent Stone turned inwards just at the subsoil level, 4 feet $7\frac{1}{2}$ inches below the summit of the Stone; on its north or inner face it was necessary, in order to reach the turn of the base, to dig through the subsoil for a depth of 9 inches, at which point our tools encountered hard gritty rock of the same composition as that forming, as already shown, the base of the central pit.[1]

Between every two of the great Standing Stones we laid bare a double row of smallish earth-fast stones, the breadth between being the breadth of each Standing Stone (see fig. 5). At some parts the rows were filled in with small stones. It is, perhaps, extremely difficult to assert with any certainty either that these stone-rows are coeval with the Circle and belong to it, or that they do not. After full consideration, I am led to the conclusion that they do not belong to the prehistoric era of the Circle, and, indeed, that they may be merely the remnants of an old dike of a century ago. This view is strengthened by the fact that these stone-rows are continued on the S.E. are between

[1] In front of the Recumbent Stone we discovered no traces of charcoal or other indications of the action of fire. And although black mould of the surface and subsoil were dug into to a joint depth of about 3 feet 6 inches, nothing in the nature of an artificial arrangement of stones was revealed.



Fig. 6. Garrol Wood Circle; View from the East. (From a Photograph by Mr James Ritchie.)

Stone VIII. and the East Pillar, and on the S.W. arc between the West Pillar and Stone I., where, however, their continuity is much broken.

I have already had occasion[1] to point out that in many of the larger Stone Circles of the Recumbent Stone variety, it is clear that the Recumbent Stone group stood, when the Circle was complete, well within the circumference outlined by the great Standing Stones. Our exploration of Garrol Wood Circle tends to confirm this, because the new plan shows, more pronouncedly than ever, that the central interment was placed in the true centre of a ring of stones which went fully 12 feet south of the Recumbent Stone; or, in other words, that the east and west diameter of 63 feet 6 inches was originally balanced by a north and south one of the same length.[2] In searching the ground, however, on the south of the Recumbent Stone, we have to admit that no traces of any other blocks of stone could be seen; but that cannot, of course, be taken as proof that they never stood there.

When the whole excavation was completed, most of the smaller stones and boulders were restrewn over the ground lying between the various structural rings of stones, and sufficient soil cast over them so as to throw up the structural portions into strong relief; and under these conditions the photographs taken by Mr Ritchie were made. And the opportunity was then afforded, also, for making a drawing of the whole Circle, the reproduction of which is shown in the previous illustration (fig. 3).

Dr T. H. Bryce, to whom I submitted the several deposits of incinerated bones found near the centre of the Circle, has reported on them as follows:—

"The remains from Garrol Circle submitted to me by Mr Coles consist of four separate deposits of burnt bones. They have all the usual characters of bones deposited in the soil after cremation. They

[1] *Proceedings*, vol. xxxviii. pp. 296–299.

[2] As the triangulation of the Circle was checked by other measurements, in three different ways and by several different readers, under my direction, both by chain and by tape, its accuracy cannot be called in question.

are completely burnt through: are grey on the surface, but show the usual white fracture.

"Certain of the fragments from each deposit are indubitably human, and each lot of bones seems to represent the remains of a single cremated body.

"The fragments are not of sufficient size to allow of a determination of age or sex, but they admit of the statement that in each case the individual had reached adult life."

2. *Glassel.*—The small and curiously-shaped group of Stones here was described in the report for 1899,[1] at which date I was under the impression that it was wholly undisturbed. There being no other site, for which permission to excavate had been granted, within any feasible distance from our headquarters near Strachan, I called on Mrs Mitchell of Glassel, and readily obtained her permission to make a thorough examination of this Circle. We did this on the 20th September; and it was not until the digging had actually begun that one of the workmen employed informed us that about twenty-five years ago the Circle had already been dug into. This notwithstanding, we carried out the excavation, Mrs Mitchell and friends being much interested spectators: and during the day we explored the whole interior, measuring 21 feet by 10 feet, and consisting for the most part of fine gravelly sand. All of this was riddled with our usual care, but the only evidences of deposits were a minute flake of light grey flint and a few fragments of charcoal. It was proved that the previous excavation—not necessarily, therefore, the original prehistoric one—took the form of an oblong with rounded ends, as shown in the plan (fig. 7) by a dotted surface. The contour of this hollow was well marked off from the hard subsoil around it by being easily worked. In it were found three waterworn boulders, and at the S.E. Stone (No. 5) of the four forming a square there was a small reddish stone, not granite, and quite unlike the others. It was under the edge of this small stone that the flint chip and charcoal fragments were found. Two other large waterworn stones lay beside

[1] *Proceedings*, vol. xxxiv. p. 168.

Stone 3, both resting upon the subsoil: they were raised, and the soil beneath and about them searched.

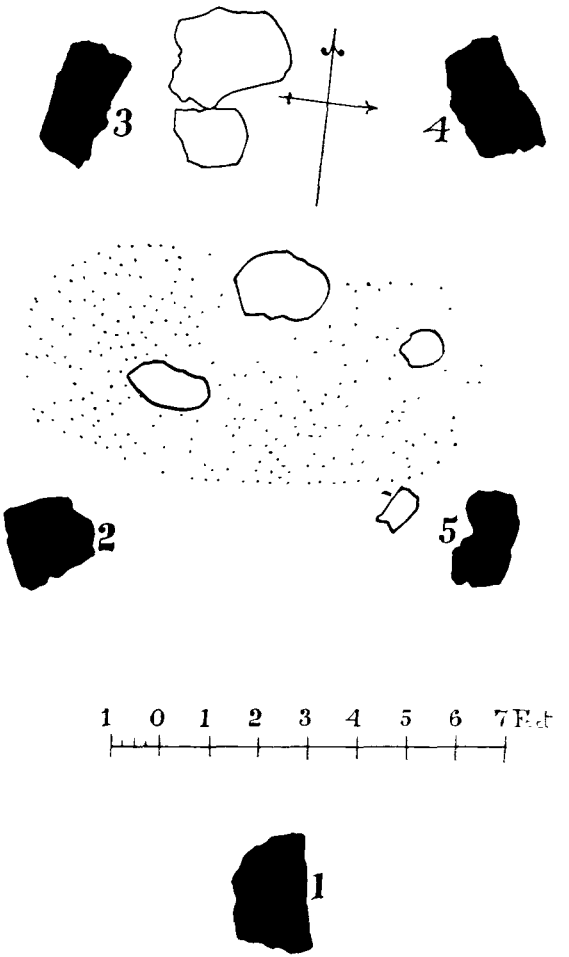


Fig. 7. Glassel Circle: Ground-plan.

Near and outside of Stone 3 lay a large flat, not very thick, slab of indurated clay-slate, or stone of some kindred species. It was totally

unlike any of the Standing Stones in character, size, and form, and at our former visit it suggested itself to me as possibly a cist-cover. On this hypothesis, I ventured to suggest that its future resting-place should be in the centre of the Circle, and there it was placed at the close of our excavation.

Among our observations it should be recorded that the true vertical height of two Stones was ascertained: No. 2 measures 4 feet 7 inches, 15 inches being in the surface mould and only 4 inches more into the subsoil; No. 5 is 4 feet 5 inches high, and scarcely goes into the subsoil at all.

In correspondence with Mrs Mitchell since the date of our excavation, I have not been able to elicit any further account of the Circle, except that it was certainly dug out several years ago, but that no relics whatever were then discovered. The probability therefore is, that at some much earlier date that 1879 the site was explored and despoiled of its contents.

To the south of Glassel House, between the north bank of the Beltie Burn and the mill walk and lade, there are two large Stones standing on the edge of the limestone rock here forming the bank of the stream. They appear to be blocks of whinstone, but are so thickly clad with mosses and lichens as to render it almost impossible to state the nature of the stone. They stand due N.W. and S.E. of each other. The centres of their summits are 9 feet 9 inches apart. One is 3 feet 8 inches, the other 3 feet 6 inches in height: the taller being five-sided and 11 feet in girth, the shorter four-sided and 7 feet 10 inches in girth at greatest. There is no record of there having been other stones in association with these two here, but they obviously seem to be the remnants of a group.

In the wood, a little way to the north of the Glassel Circle, is a great boulder called the Bishop's Stone. In ground-plan it is irregularly triangular, the sides measuring 17, 15, and 16 feet respectively. In general height it is nearly 6 feet, and near the middle of the summit 6 feet 6 inches. The computed weight is about 38 tons. It is composed of grey granite.

II. Report on Stone Circles in Aberdeenshire.

1. *In the Image Wood, Aboyne.*—During all our surveys it has never been our lot to meet with so small a Circle as this. The space

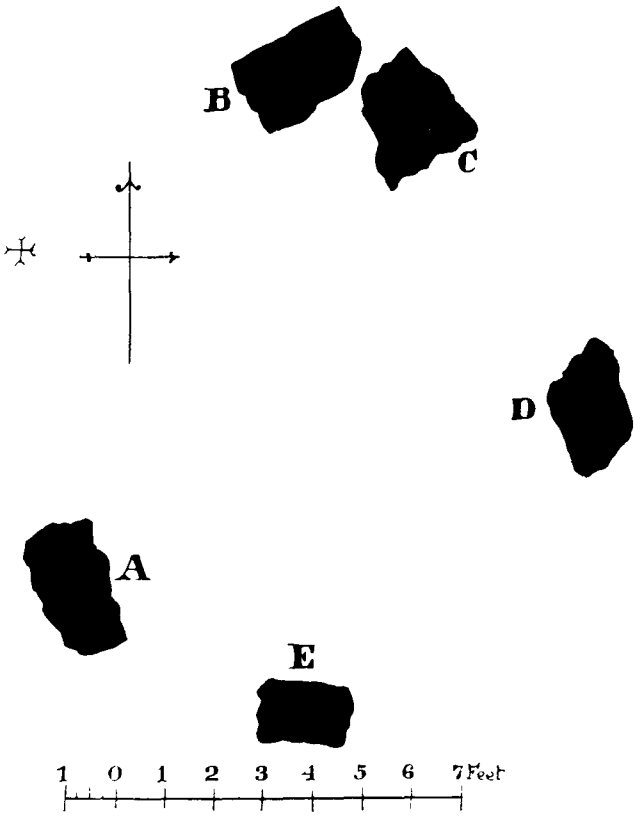


Fig. 8. Circle in the Image Wood, Aboyne; Ground-plan.

between the inner faces of its north and its south Stone is only 11 feet wide. In the prospect of being able to excavate such a small area with ease in one day, I visited the site, and in the meantime wrote

to the agent of the Marquis of Huntly to obtain permission for the purpose. No reply having come, I, after some few days' suspense, revisited Aboyne, and hearing that Lord Huntly was then in the vicinity, I despatched an express message to him requesting the

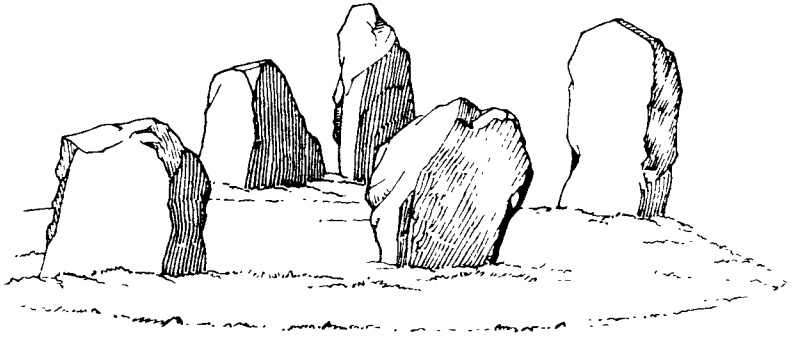


Fig 9. Aboyne Circle : View from the South.

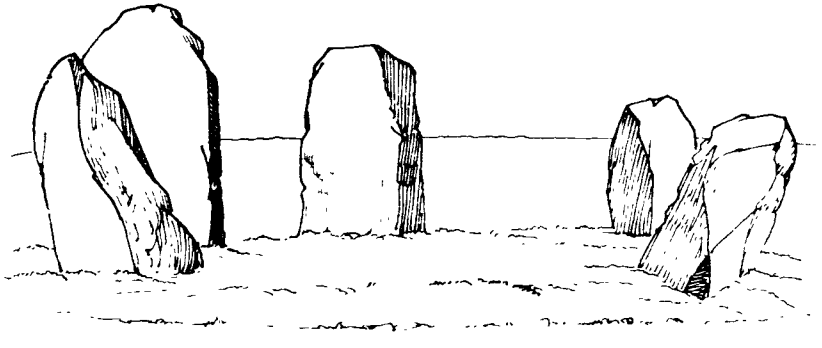


Fig. 10. Aboyne Circle : View from the West.

permission. Unfortunately, it was not in his lordship's power to grant the permission at once : but in his reply Lord Huntly said :— "I may tell you that some years ago I dug a cross-trench at this Circle and found only some black earth and cinders, insufficient to enable me to decide whether the Circle was a Pictish dwelling-house or a burial-place. Nothing of interest was found."

As time was passing, I had now to content myself with making a plan and drawings of this Circle (see figs. 8, 9, 10).

The site is in an oak plantation on the left of the road to the home-farm at Aboyne Castle, and is distant from the front of the "Huntly Arms" about half a mile.

On the 25-inch Ordnance map the Circle is shown as one of five Stones, and incomplete on the east—the exact opposite of what their present positions are (see the ground-plan, fig. 18).

The first notable feature is, as already stated, the extreme smallness of the inclosed area; the next is, the close juxtaposition of the two Stones on the north, and the third is, that all the Stones are beautifully erect, massive, and shapely blocks of granite and whinstone. I subjoin their heights:—

Stone A,	3 feet	1½ inches,	whinstone,	flat-topped.
,, B,	3 ,,	6½ ,,	pale red granite,	pointed.
,, C,	4 ,,	3½ ,,	whinstone,	rugged-topped.
,, D,	3 ,,	11 ,,	pale red granite,	flat-topped.
,, E,	2 ,,	7½ ,,	,, ,,	rugged-topped.

The circumference, taken through the centres of the Stones, is exactly 40 feet. A very slight mound rises around the bases of all the Stones, causing the inclosed space to be slightly higher than the general level of the ground outside; but this may be due, I think, in some degree, merely to the modern path being carried round the Circle.

There is a very brief notice of this Circle in the *New Statistical Account*, where it is also recorded that a Sculptured Stone, formerly at Loch Kinord, was removed thence and set up near the Circle.

2. *On the Hill called Tom-mavrie.*—This remarkably situated Circle came under observation as long ago as the year 1792, when the minister of Coull parish wrote of it thus:—"About 1½ miles west of the manor are to be seen the remains of a Druidical temple. The place is called Tam navrie [*sic*], which signifies the Hill of Worship . . . only a few

large stones, some upright, some fallen."[1] In 1842 the following remarks are made by the Rev. W. Campbell, A.M.[2]:—"One of those Circles of Stones standing upright, so common in Britain, and called Druidical Circles, may be seen on a small hill called Tom-na-hivrigh, or the Hill of Worship or Justice."

In the description of the parish of Tarland and Migvie by the Rev. Andrew and the Rev. J. Watson, this hill and Circle are noticed as the "distinct remains of a distinguished Druidical temple, containing two Circles formed of large erect stones at short intervals, from 4 to 5 feet in height, 3 broad, and 2 feet thick."[3]

Reference is also made[4] to it by Dr John Stuart in these words:—". . . . the eastern termination of the ridge is called Tom-naverie, on which are to be seen the remains of two Circles of large erect stones."[5]

The site, on a fine green hillock 597 feet above sea-level, is encompassed by hills on every side—hills near at hand in the adjoining parishes, hills in the middle distance, as *e.g.* Clochnaben, Kerloch, and Morven, while Lochnagar and some other Grampian peaks close in the panorama in the extreme west. The Circle is placed on the crest of the green and broomy hill at a point 300 yards S.S.W. of the Mill of Wester Coull, and would in past times have commanded the view of perhaps six or seven other Circles on the N., the N.W., and the W. In this respect we may compare it with the fine trenched Circle near Insch, on the Candle Hill.[6] Only poor remnants of these are said still to remain. What little soil there is seems to be very thin, and great masses of the underlying granite protrude in several directions. On the west a large

[1] *Old Stat. Acc.*, vol. iii. p. 201.
[2] *New Stat. Acc.*, vol. xii. p. 958.
[3] *New Stat. Acc.*, *ibid.*, p. 842.
[4] *Proceedings*, vol. i. p. 260.
[5] It is somewhat disconcerting to be unable to decide from these accounts whether there were on Tom-naverie really two separate circular groups of stones standing apart, or whether the "two Circles," as above described, were really one group, having concentric rings of stones. Dr Stuart notes three other Circles in the vicinity—one at Knowehead, one between the Doune and Tarland, and the third to the west of it; also several Cairns in close proximity to them.
[6] See *Proceedings*, vol. xxxvi. p. 545.

portion of the hill-face has been quarried away, and quite recently the quarrying has been carried close up to, within indeed 3 feet of, one of the few Standing Stones yet *in situ* (see the plan, fig. 11). The close cover of the broom-bushes tends further to disfigure the Circle, and renders exact mensuration extremely difficult.[1]

Technically, there are several interesting features in Tom-naverie Circle. The first to arrest the eye is the size of the massive earth-fast Stones set in on the east and the west of the Recumbent Stone (A B and C D on the plan, fig. 11). Like those in the Circle at Hatton of Ardoyne,[2] they are much larger and higher than any of the settings of such stones elsewhere observed. Further, the interior space shows indications of two concentric settings of Stones, several of those in the outer ring being specially large and massive. And lastly, the position of the Recumbent Stone is so widely abnormal, that it was only after repeated readings of the compass and the most careful comparison of the general topographical features of the district that it was possible to feel assured of the correctness of our observation. The plan (fig. 11) shows this great prism-shaped block of whinstone lying with its longer axis pointing N.N.W. 25°; or, to restate the case, if a vertical line be drawn from the centre of its inner face at right angles, it would bisect the Circle in the direction of N. 65° E. This is by far the greatest easterly divergence yet recorded in the positions of recumbent stones.

All the other great Stones, whether still erect or fallen, appear to be of the pale red granite of the hill *in loco*. Stone I. stands 5 feet 7 inches clear of the ground, and girths at the base 8 feet 6 inches: it is a rugged and rather top-heavy block, and the rock near its base has been quarried away so close as to cause real uneasiness lest this fine Stone should be shaken from its foothold. Stone II. is awanting: whether it has met

[1] This, I am pleased to say, will no longer be the case, for I enlisted the interest of the miller, Mr M'Robbie, in the Circles, and gained his promise that these incumbrances should be cleared away. His ready help in the second day's planning of the interior I here cordially acknowledge.

[2] *Proceedings*, vol. xxxv. p. 244.

the fate we dread for its fellow cannot now be affirmed; but it is high time that steps were taken to ensure the future safety of all the Stones that are left. Stone III. has a very square flat top, and is only 3 feet 3 inches in height; its basal girth is 5 feet 6 inches.

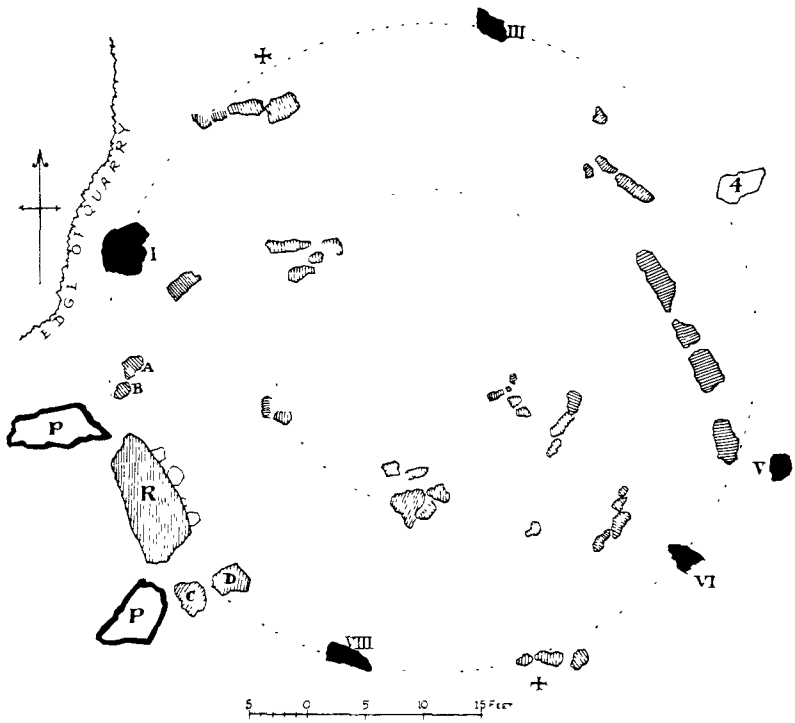


Fig. 11. Circle on Tom-naverie; Ground-plan.

The fourth Stone has fallen prostrate backwards down the slope of the hill. It measures 4 feet 6 inches in length, 2 feet 6 inches in breadth, and is 14 inches thick above ground. Stone V. has a rhomboidal base, girthing 6 feet 6 inches, and is 3 feet 1 inch in height, measured to the crest of its ridge.

Stone VI. leans inward, having at present a vertical height of 2 feet 11 inches. Its full length down the slope of its back is 5 feet, and in girth at the base it measures 6 feet 9 inches. Stone VII. is awanting, unless the fragments lying near its site are pieces of it broken up for some utilitarian purpose. The VIIIth Stone has a flat top, stands 4 feet 8 inches above the ground, and girths 9 feet 8 inches. Its outer face is quite smooth and vertical, and measures fully 3 feet 9 inches across the base. The East Pillar (see fig. 12), in its present fallen state, shows a thickness above ground of 2 feet 3 inches. It is a huge, ponderous, and very uneven mass, measuring in extreme length and breadth 7 feet 3 by 4 feet 6 inches. The West Pillar, also prostrate, is

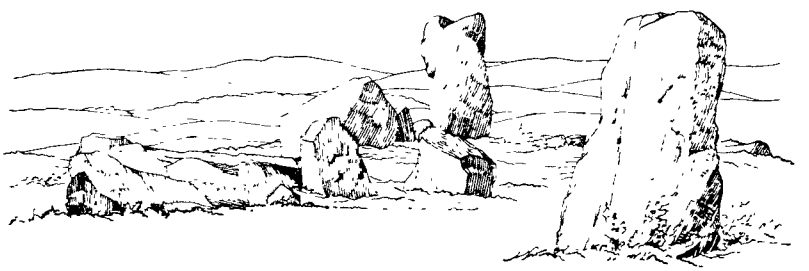


Fig. 12. Tom-naverie Circle: View from the South.

even larger and probably heavier. Its ascertainable thickness is 1 foot 10 inches at the western edge. It is 9 feet long and 4 feet wide.

The Recumbent Stone, which has been computed to weigh 12½ tons, measured along its nearly straight gable-like summit, is 10 feet 4 inches in length, but its base is 11 feet 3 inches long and nearly 5 feet in breadth. The lower inside edge of the Stone goes deep down amongst small stones and cavities beyond the reach of hands or tapes: and its position suggests the probability that it is not now what it was originally, but that, owing to some attempt at searching below it, the Stone has fallen forward a couple of feet or thereby. Its outer slope, from apex to ground, measures 5 feet 3 inches, and its steeper inner slope 3 feet 5, the apex-ridge being 3 feet above ground in vertical height.

The four great earth-fast blocks A B and C D are part of one of the concentric settings now proved to be so frequent an adjunct of the Circles. They seem to have been placed here with more than usual care, for B and C are each 2 feet 4 inches exactly above ground, and A and D 1 foot 8 inches. All the rest of the earth-fast stones, near the assumed site of Stone II. *e.g.*, and the larger ones on the east arc, do not rise to this height, none being over 17 inches high.

It will be noticed that the five Stones still erect and the fallen one (No. 4) are set almost precisely on the circumference of a true Circle 56 feet in diameter, and also that the Recumbent Stone is on the same circumference, and not within it, as in some of the larger examples. The innermost low setting of smallish stones (shaded in the plan, fig. 11) is almost truly concentric with this, and is 28 feet in diameter; but with regard to the middle setting, much confusion exists, which, without excavation, it would be futile to attempt to explain.[1]

3. *Waulkmill, near Tarland.*—A little to the north-west of the village, and on the west bank of the Millhead Burn, there is marked on the O.M. the site of a Stone Circle—a site now marked by only one Stone. The height above sea-level is 520 feet. The surrounding

[1] As to the name of the hill on which the Circle stands, the following six forms of spelling occur:—Tom-na-yerie on the Ordnance map; Tom-na-verie, Tomnahivrigh, Tam-na-vric, Toms-na-verron, and lastly, Tom-nàve-rie. This last, and most aberrant, as at first it seems, of all these pronunciations, was the accentuation used by an old Tarland resident who laid great stress upon the middle syllable, "nayv-rie." In the neighbourhood there is the name Carnaveron, or Carn-na-veron, to supplement this name. To what language these names are to be ascribed may in itself be perplexing: but, through the good offices of a friend, I may quote the following suggestion, made by one with whom the study of Gaelic place-names is a long-cherished and accurately developed science. "The form given in the *Statistical Account* seems the best.—*Tom-na-hivrich*: and may be for *Tom-na-h'-iubhraich* (pronounced, Tom-na-hi ūvrich) = the Mound of the Yewwood. Though there may be no yews at the place now, the mound may have been a burying-place, and we know that the yew was closely associated with graveyards, *e.g.* the ancient Fortingall Yew." This suggested interpretation of this puzzling name is merely given by Mr Gow as a probable one from the spelling; he has not heard the name pronounced. But the remark raises the question: Is it a fact that the yew-tree was planted in Scotland in direct association with burying-grounds?

ground swells very gently into a slight rise, and the Stone leans a little to the south. It is a broad and massive block of whinstone, having a girth of nearly 9 feet and a height of 5 feet 8 inches. Its northern face, trending due N.N.W. 5°, is the smoothest and most vertical (see fig. 13).

The following particulars were gleaned through inquiries made by Mr Ritchie, of Port Elphinstone School:—That about seventy years

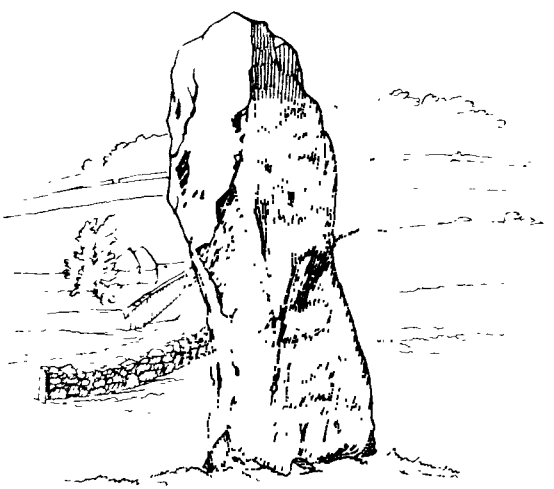


Fig. 13. Remains of Stone Circle at Waulkmill, Tarland.

ago Mr Esson, the father of the present tenant of Waulkmill, had removed the ten or eleven other Stones forming the Circle, an action he afterwards much regretted; and that he also knocked off two projecting pieces of this one Stone now left, because they interfered with the ploughing. Mr Ritchie also informed me that Mr J. A. Milne of Melgum, who owns these lands, had in his possession certain relics, believed to be stone and glass buttons, which were found in 1898 in a stone coffin unearthed in the sand-pit closely adjoining the Circle. Upon this, I wrote to Mr Milne requesting the favour of an inspection

of these relics, and in the course of a few days they were forwarded to me. The account given of their discovery is to the following purport. In the *Aberdeen Evening Express* of 6th August 1898 we read :—

"An interesting find of an antiquarian character was recently made by Mr Cooper, gamekeeper, Melgum, Tarland, in the shape of what appeared to be the grave of some person of distinction. Mr Cooper was digging in a sand-bank when he came upon four undressed stones, each measuring about 2 feet broad and 18 inches high, placed one above the other, and at a depth of 4 feet from the surface. The position of the boulders aroused Mr Cooper's interest, and on making further search he discovered eight stone and glass buttons . . . which were of different colours, and were about an inch or $\frac{3}{4}$ of an inch in diameter, lying at regular intervals, as if they had fallen from the garment worn by the occupant of the tomb. A silver buckle of antique workmanship, and two or three pieces of steel or wrought-iron, apparently the remains of some weapon, as well as a number of small bones, were also found. The bones, when lifted, immediately crumbled into dust. . . .

"Mr Dugud Milne, proprietor of Melgum, we understand, is taking a great interest in the find."

In his letter to me accompanying the relics Mr Milne observes :—

"I think the printed cutting was supplied by the policeman at Aboyne, who had the things in his possession for some months, until I heard of them and claimed them."

Then, after noting the resemblance between these buttons, of blue glass and vitreous paste, and others he had seen in the museum at Palermo (which had been found amid the ruins of Girgenti), Mr Milne continues :—

"At a later date, some time in 1899, a number of silver articles were found in the same sand-pit. My own keeper, Cooper, heard of them about 1901, and told me they had been taken away by the man who had found them, who was working in the pit. No one else seemed to know about the things, whatever they were, and I fear all trace of them is lost."

The objects found in 1898 by Mr Cooper, associated with the interment in the sand-pit, consist of—(1) Seven small flat rounded discs of reddish-brown and light-brown quartzite. Four of them are perfectly circular, and are $\frac{7}{8}$ of an inch in diameter and $\frac{1}{8}$ of an inch in thickness; the other three measure respectively $\frac{15}{16}$ inch by $\frac{7}{8}$ inch,

$\frac{13}{16}$ inch, and $\frac{13}{16}$ inch by $\frac{7}{8}$ inch. They are all evidently natural pebbles, showing no signs of artificial abrasion, shaping, or tooling of any kind; but they have been, as evidently, selected on account of their marked equality in size, form, and thickness, so as to form a set. Two quartzite discs of almost precisely the same form, size, and colour were found among the relics obtained by the Society during the excavation of the Middle Fort on Dunadd, Argyllshire, during 1904. Smaller stone discs, varying in species, were also found at Camelon. A polished disc of serpentine, pale green mottled with black, is amongst the relics preserved in the Museum, found amid the ruins of an ancient inhabited site on the Ghegan Rock, near Seacliff, presented by Mr J. W. Laidlay in 1870. This disc measures very slightly over $\frac{7}{8}$ of an inch in diameter by $\frac{5}{16}$ of an inch in thickness, and is perfectly round and naturally smooth.

Somewhat similar are the two much smaller and thicker flattish pebbles of brownish-grey quartzite which were found, with two other irregularly-shaped pebbles and a portion of a thick ring of jet, in a cist near the underground house at Cairnconan, Forfarshire.

Dr Anderson suggests that stone and glass discs of these types were used as tablemen, or counters in a game, analogous examples being found in Norway and elsewhere, and that the roughness of the flat under surface of the discs of glass and vitreous paste is due to the process of manufacture.

Any of these discs of quartzite could have been utilised as buttons by being tightly wrapt in a small piece of leather, left sufficiently long on one side to be twisted up into a tang for fastening.

(2) Two flat rounded circular discs of translucent rich dark-blue glass and portions of two others. These compare closely in diameter and thickness with the quartzite discs just described, except that the under surface is quite flat and somewhat roughened, as if by having been affixed to a socket or setting. If this was the case, these glass discs also could have been used as buttons. I am indebted to Mrs L. M. Smith, F.S.A. Scot., for sending for comparison a small glass disc, said to have been found in a Phœnician tomb, and acquired with other relics in Sicily. It is of translucent pale green, not so neatly finished as the

Tarland discs of blue glass, and measures $\frac{5}{8}$ of an inch in diameter—about the same dimensions as the discs from Camelon.

(3) Two circular discs of nearly the same size and form as the rest, one measuring $\frac{7}{8}$ inch the other $1\frac{1}{16}$ inch in diameter, but composed of vitreous paste of three tints, run into a decoration which is not formal or regular enough to be classified as a recognised pattern. The colours employed are a pale turquoise-blue, a dull Indian red, and a pale biscuit-yellow. Both in colour-scheme and the very effective and pleasing, although irregular, lines of this decoration, these vitreous paste discs are unlike any other pieces in the Museum.

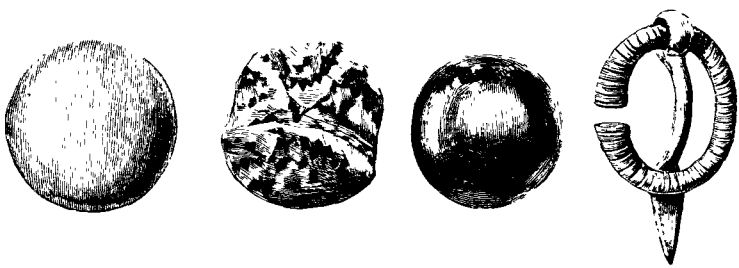


Fig. 14. Discs of quartzite, vitreous paste, and blue glass, and small penannular brooch of silver found at Waulkmill. ($\frac{1}{1}$.)

(4) A piece of almost colourless glass, $1\frac{1}{8}$ inches in length, $\frac{3}{4}$ inch in thickness, and cylindrical in form, not unlike part of the stem of a large wine-glass.

(5) A small silver penannular brooch, $\frac{3}{4}$ inch in diameter, oval in cross-section, with very slightly expanded ends, and the upper surface corrugated with deeply and regularly incised transverse bars. The fastening-pin measures $1\frac{1}{4}$ inches in length, and is of the type shown in the illustration (fig. 14).

4. *Corsedardar Stone, Birse.*[1]—The site of this Standing Stone is close to the road that here tops the ridge dividing the policies of

[1] For this investigation I am indebted to my son Cecil.

Finzean from the Wood of Balnahard, at an altitude of 745 feet above sea-level, and half a mile N.W. of Whitehill post-office, as marked on the old Ordnance map.

Quite near it, in a fir plantation, are two great Cairns, marked on the O.M. as irregular oblongs.

The Stone has been split, and now has the two portions set into a bed of concrete and pieced together by strong iron bands, rather to its disfigurement, but much to its preservation. It is a thick and



Fig. 15. Corsedardar Stone, Finzean.

squarish block of reddish granite, not more than 4 feet 7 inches in height and 7 feet in girth (fig. 15). The name, Corsedardar, is on the O.M. given to the hill, and not to the Stone, the word being printed in plain lettering.

In the *New Statistical Account*[1] the Rev. George Smith writes:—"A little farther eastwards [from Finzean] a long granite stone, such as was used in ancient times to mark the grave of some eminent person, was dug up a good many years ago, and now stands on the top of the hill of Corsedardar."

[1] Vol. xii. p. 789, date 1842.

IV.

DESCRIPTION OF THE FORTIFICATIONS ON RUBERSLAW, ROXBURGHSHIRE, AND NOTICES OF ROMAN REMAINS FOUND THERE.

By ALEXANDER O. CURLE, F.S.A. Scot.

The peak of Ruberslaw is a prominent feature in the landscape of southern Roxburghshire. Situated in the angle formed by the confluence of the Teviot and its tributary the Rule, it is nine miles distant from the nearest point of the English border, five miles as the crow flies east of the town of Hawick, and five and a quarter miles south-west of Jedburgh. Attaining to an altitude of 1392 feet, unlike the numerous hills of the district, it has a summit rugged and precipitous, composed of igneous rock much exposed and disintegrated, which has thrust its way through the strata of the old red sandstone lying on the flanks of the hill. Leyden has aptly described it in *Scenes of Infancy*:

> "Dark Ruberslaw, that lifts his head sublime,
> Rugged and hoary with the wrecks of time:
> On his broad misty front the giant wears
> The horrid furrows of ten thousand years."

Being an isolated peak, it commands a magnificent prospect of the surrounding country. To the east and south the Cheviots meet the skyline; to the west range the grassy hills of Liddesdale and of Selkirk- and Peebles-shires; while to the north lies the valley of the Teviot, and over ten miles of fertile champaign the triple heights of the Eildons assert themselves, with the more distant Lammermoors crowning the horizon. For a fort or post of observation it affords the most commanding situation in that region. Viewed from the west and south, the characteristic features of the hill are: the summit terminating in a precipitous rock, some 25 feet in height; a plateau which from the base of that rock stretches round towards the south-east; and about 50 feet below the edge of the plateau, a natural terrace passing round the hill from the east and south and drawing towards

the summit on the north. From the north-west a rough track leads through the heather, mounting the shoulder of the hill, and after passing between a number of rocky hillocks and intersecting the terrace, approaches the summit at the north-eastern extremity. Immediately to the south-east of the hillocks which form the left side of the pass, up which this track leads, is a similar but broader depression which, running in the same direction, meets it just below the summit and before it meets the terrace. This hollow measures about 25 paces in width, and is strewn at intervals with large boulders, which present such regularity of aspect, crossing it in rows, as to suggest that their position is not due to natural causes; and therefore I direct attention to them, though it may not be possible to form a definite conclusion concerning them. About 120 yards from the point of junction with the path, a ridge across the hollow suggests the existence of a wall; 15 paces nearer a line of boulders is met with; at 11 paces further on a similar line; and at 13 another; and for some distance onwards the boulders crop up irregularly over the surface in considerable numbers.

The summit, as will be seen from the plan, is roughly pear-shaped in outline, the broader end being near the entrance towards the north-east, while the narrow extremity bends slightly towards the south. Except at the entrance, where the approach leads up an easy gradient, it is flanked all round by steep banks and precipitous cliffs, which latter at the extreme south-western end rise about 25 feet above the plateau beneath. Near the centre of this cliff a chasm runs from top to bottom, which, from its occupancy and employment in Covenanting times, bears the name of "Peden's Pulpit." The greatest length of the summit is 265 feet; its maximum breadth, which occurs at 80 feet from the entrance, is 105 feet. The entrance (marked A on the plan, fig. 1) between two rocks is 8 feet in width, and across its sill there is a suggestion of the base of a wall. Proceeding inward, you enter a basin, the edges of which are chiefly natural rock; but in one place at least, on the north side, though grass-covered, there appears to be a wall filling up a gap between two rocks. The ground rises gradually, and at 65 feet inwards on the north side

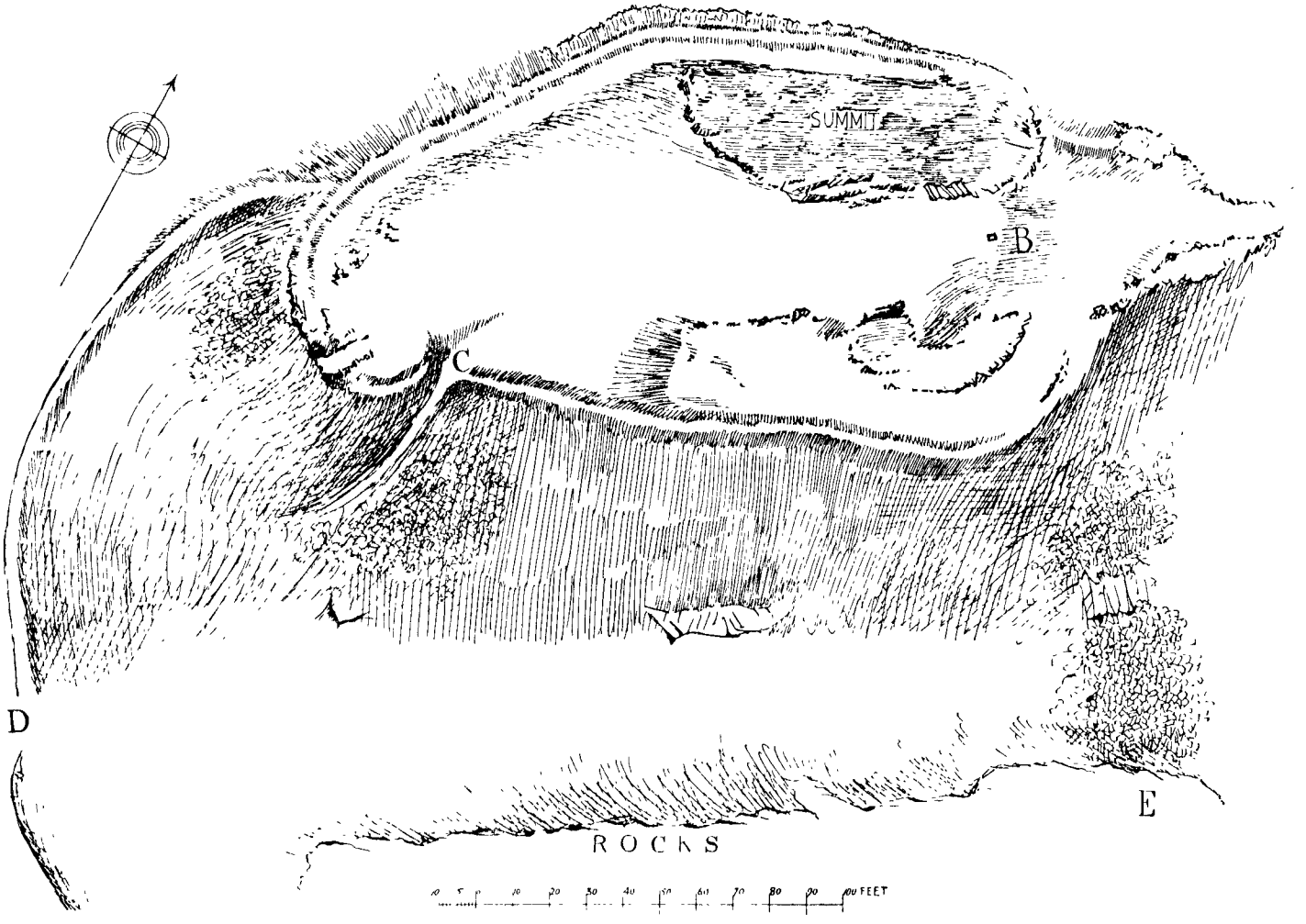


Fig 1. Plan of Fort on Ruberslaw. (By Thomas Ross, Architect.)

attains its highest point, an outcropping rock swept bare by the winds, and from a few feet inside the northern edge reaching nearly half way across. On the opposite side of the summit another rock of smaller dimensions crops out to the surface. Joining these two eminences at the eastern end, there is a bank (marked B on the plan) which has all the appearance of being artificial. All around the summit, following the edge, runs a mound or rampart with a trench on the inner side. This rampart in some places is still several feet high, and, to judge from two sections, which seem to have been made by sheep, is composed of earth and small stones. From the face of one of these sections I picked out a number of minute fragments of bone, bleached with the elements The trench is particularly definite on the northern side, and is here divided by transverse ridges of a foot or so in breadth, probably the bases of walls, into a number of rectangular enclosures, apparently for hut shelters against the rampart. I have noted seven of these along this side, the largest of which, nearest the outcropping rock, is 30 feet long, while the others, though all varying in size, are mostly about half that length. At the south end (at C on the plan) a pathway leads down a steep bank to the plateau beneath. Now, although there is no appearance of a built wall on the summit, except, as mentioned before, near the entrance, yet on the slopes around there lie rickles of stones many feet deep, either the wreck of a wall which crowned, or faced, the earthen rampart, or perhaps placed in their present position to impede the rush of an enemy

Five-and-twenty feet or more below the summit, and to the south of it, lies the plateau already referred to. Towards the south-west it is more or less level and grassy; but on the south, and running parallel with the summit, is a mass of rock reaching for 210 feet eastwards, separated from the base of the slope, which runs down from the summit, by a narrow stretch of turf about 20 feet in width. This rock on the inner side rises gradually as the ground falls away towards the east, but on the southern face it is throughout rugged and precipitous, and forms a strong natural defence. The main part of the plateau is

surrounded by a rampart which starts at the base of the cliff, 43 feet to the north-west of Peden's Pulpit, and proceeds along the edge of the plateau. This rampart has also been slightly broken into at one point, and shows its composition to be stones, of no great size, and earth. Following it along, we come to the main entrance at a spot (marked D on the plan) exactly opposite the commencement of the narrow pass between the summit and the rocks, and 94 feet distant therefrom. This entrance is 13 feet across. To the south of it at intervals may be seen the lower course of a wall of rude masonry, composed of rough unhewn blocks of whinstone, and the debris strewn around shows that the wall must have been of considerable dimensions. This building is slightly below the level of the rampart, and apparently formed a facing to it. Proceeding onwards from the entrance the rampart meets the rocks to the south of the plateau on the edge of the southern face, and a grass-grown path the whole length of the ridge shows the line of the defences. Now, this ridge culminates in a cliff (E on the plan) which towards the summit, *i.e.* on the inner side, presents a face about 30 feet in height, and is distant about 40 feet from the rocks at the edge of the slope opposite. As this was undoubtedly a weak point in the natural defences of the hill, the fort builders erected an enormous wall to fill up the gap and link on the rocky ridge with the summit. What the height of this wall originally was we cannot tell, but the debris forms a heap across the gap several feet high and 24 feet broad. On the outer or eastern side of this mass of debris, and 14 feet back from it, there is an irregular row of boulders set on end, running parallel to it. It is difficult to see exactly what purpose these boulders could have served with a high wall in rear of them, but I think there cannot be much doubt that their position there is not accidental. On the plateau there are no hut circles or similar depressions as on the summit, from which we may infer that the occupants of the fort had their dwellings all on the latter situation, probably reserving the former for their flocks and herds. No springs of water are to be found at either elevation, nor is there any appearance of a well: but along a line at a level about 150

feet below the top of the hill on the south-west side, and commencing almost straight down from the entrance to the plateau, there are a number of excellent springs, this line probably representing the upper edge of the sandstone formation. At this level, and passing within a few feet of these springs, there are the remains of an old stone dyke which has at one time formed the upper boundary of a field or plantation. Towards the middle of this wall, and in the vicinity of the springs, one is struck by the huge size of the whinstones which the builders have employed, and also by the fact that for a considerable distance there appear three distinct rows of large boulders running parallel to each other, occupying a space of from 8 to 10 feet, each row being 2 feet apart. Such regularity does not seem to be fortuitous; but as the position of the stones is on the upper side of the springs, though within a few feet of them, their purpose is obscure.

Between this row of springs and the plateau winding round the hill, occurs the terrace I have before referred to. In appearance it resembles a grass-grown road, but I think its formation is natural. Following it round the hill from south to east, it passes by the base of the crags that flank that side of the plateau, and, proceeding onwards across the march dyke, falls away in a long, straight slope down to the base of the hill. Near the top of this slope, and not far east of the point where the march dyke crosses the terrace, are two contiguous and rectangular enclosures, contained each on three sides by a broad bank of earth and stones. The fourth side of these enclosures, that towards the north, is in each case the craggy face of a cliff. The upper enclosure is slightly the larger, its dimensions being 105 feet along the upper or western face, by 90 feet in length. The upper face of the lower enclosure is 15 feet shorter than that of the other, on which it subtends, but its length is about 120 feet. About 40 feet from the lower side on the front or south face an entrance is distinctly visible. The banks are on an average about 6 feet wide, and rise about 2 feet above the level of the surrounding turf. Where the two enclosures are in contact the breadth of the bank is much greater. By permission of the proprietor, Sir Robert Usher, I had

the bank dug into, and found it to be composed of large blocks of whinstone embedded in earth without any semblance of building. A couple of short trenches dug towards the centre of the upper enclosure disclosed no signs of occupancy—the soil was deep and the grassy surface hummocky.

Now, in connection with the fortifications on this hill there arises a subject of considerable interest. I have mentioned that the rock is igneous, and that it is exposed in great quantities about the upper part of the hill both in cliffs and shattered fragments. The builders of the walls or ramparts of the fort, having this unlimited material at hand, had no need to bring from any other part of the hill a supplementary supply of freestone. Yet wherever is encountered the debris of walls, or the rickles of stones around the summit and the plateau, there also are to be found a certain number of carefully dressed freestones both red and white in colour. The majority of these stones are in longitudinal section, roughly triangular, being about 12 inches in depth, the length of the face varying from 11 to 15 inches, with the breadth invariably 8 inches. A few of them are ornamented with well-defined diamond broaching (see fig. 2), exactly similar to that observed on many stones found in the Roman camp at Castlecary, on the Northumberland Wall, and other Roman sites. One stone I observed was neatly dressed on the face with a herring-bone or feather broaching. A few stones of from 2 to 3 feet in length have the appearance of lintels, or sills of windows. There can, I think, be little doubt to anyone examining these stones that the work on them is Roman, and we have here probably the remains of a Roman building of some sort which the builders of the fort at a later date made use of. But we are met with a difficulty. The Romans, as far as we know, never erected buildings or kept outposts on such lofty and exposed situations. On the suggestion that these stones might have been taken up to the summit from some camp lower down, though for what reason is not obvious, I made a careful search round the flanks of the hill for traces of Roman entrenchments or building, but found none

An examination of the stone walls, which in several places run high up the hill, showed that the stone almost invariably used in them was whinstone, and that only where the walls approached highest up the hill on the west and south sides of it, did freestones occur, and these

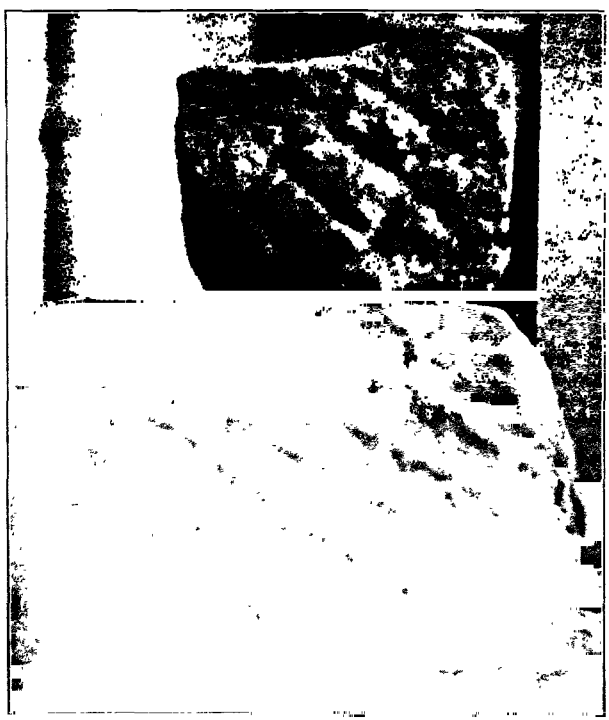


Fig. 2. Stones with diamond broaching.

showed the same workmanship. On the back of the hill, opposite the plateau, except in the immediate vicinity of the summit, I could find none of these stones. Finally, some of the stones are seen protruding through the turf on the summit itself. On the slopes immediately below, and especially on the south and south-east sides, they occur in



Fig. 3. Hoard of Bronze Vessels found at Rubenslaw

greatest numbers; in the ruins of the wall around the plateau they are occasionally visible, and as you descend the hill they rapidly cease to appear. Without excavation it is impossible to arrive at a definite conclusion; but the evidence points to there having been a Roman building on the summit, whence a most extensive prospect would make it suitable for a post of observation, or for a signalling station. Three and a half miles due south the Wheel Causeway, which, though never identified as a Roman road, has had that character from time to time attributed to it, probably merged in the highway from Liddesdale to Jedburgh, near the farm of Cleuchhead.[1] The nearest ascertained Roman station is Cappuck, on the Oxnam, 8 miles to the east In the year 1863 a workman employed digging field drains on the upper portion of the hill on the south side, discovered a hoard of bronze objects, which were placed in the Hawick Museum and noted in the *Report on Local Museums in Scotland*, by Dr Anderson and Mr G. F. Black, in 1888.

It consisted of the objects shown and numbered in fig. 3, viz.:—

1. The handle and rim of a patera or pan—extreme length, $12\frac{3}{8}$ inches; greatest breadth across the handle, $2\frac{3}{8}$ inches; length of handle, $5\frac{3}{4}$ inches; diameter inside the rim, $6\frac{1}{4}$ inches.

2. Handle of a præfericulum, or bronze ewer (see also fig. 4), decorated with two figures of dwarfs in high relief. The upper figure has his right foot placed on the head of a bird of prey, probably an eagle, while the left, raised, rests on some object which may represent a cloud. The figure at the base of the handle is in a sitting posture looking upwards, and holds some indefinable object in his right hand. Between the bird and the lower figure appears some slight incised decoration of a foliageous character. The horn-like projections which were attached to the rim of the vessel (see fig. 6) are rendered as the heads and beaks of birds—the eyes and feathers being clearly discernible. The eyes of the figures, the band which crosses the handle at the shoulder, and two prominences on the upper portion, have all been plated with silver. The greatest length is 5 inches; diameter between the points of the curved

[1] Jeffrey's *History and Antiquities of Roxburghshire*, vol. 1 p. 248.



Fig. 4. Bronze Handle found at Ruberslaw.



Fig. 5. Bronze Handle found at Carnholly.

projections, 3 inches. Among the vessels with handles of similar form in the British Museum there is one found at Carlisle.

For comparison there is also shown here (fig. 5) a similar handle found at Cairnholly, Kirkcudbrightshire.[1] It is $6\frac{1}{4}$ inches in length, and has a diameter of $4\frac{1}{2}$ inches between the projecting points. The lower portion of the handle takes the form of a Medusa head: the main part is divided into two compartments: on the lower and larger appears a tripod, with a serpent entwining its body around one of the legs: above

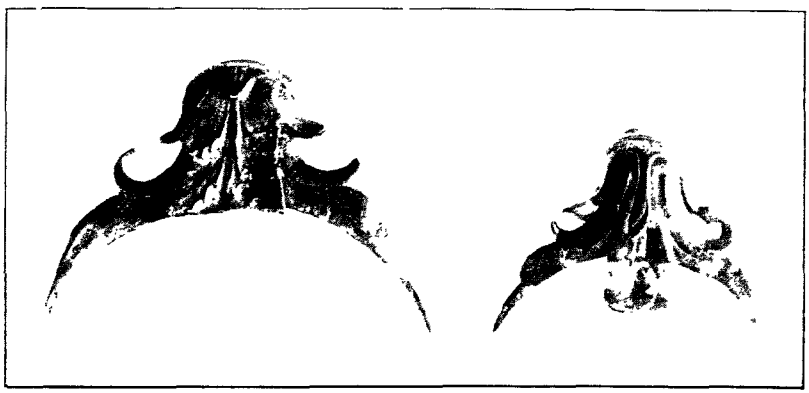


Fig. 6. Tops of the Handles, seen from above.

the tripod, on one side, a cithera: on the other, a bow unstrung and a quiver of arrows. The higher compartment shows a stag browsing in a forest. The upper portions of the two handles (fig. 6) are very similar.

3. Handle of a patera, 7 inches in length, and $2\frac{5}{8}$ inches in breadth across its widest part. The device on this handle is almost identical with that on a specimen from Herringfleet in Suffolk, on which occurs, however, the name "Quattenus." It is illustrated by Mr F. Haverfield in the *Proceedings of the Society of Antiquaries of London*, vol. xvi., and differs but slightly from that on the handle of one of the saucepans found on Lamberton Moor, and illustrated in this volume.

[1] Now preserved in the National Museum of Antiquities.

4. Fragment of a tinned pan, the diameter of which inside the bottom is $4\frac{3}{8}$ inches.

5. The lower portion of a pan, the diameter of which inside the bottom is $4\frac{1}{2}$ inches.

6. Do. : interior diameter, $3\frac{1}{2}$ inches.

7. Do. : diameter, $2\frac{1}{8}$ inches.

8. Do. : exterior diameter, $3\frac{9}{10}$ inches.

9. Fragment of a rim ; diameter inside the extremities, $11\frac{1}{4}$ inches.

10. Do. : longest interior diameter, $6\frac{15}{16}$ inches.

11. Bottom and portion of side of a flat-bottomed vessel : interior diameter, $8\frac{3}{4}$ inches : height of side, $1\frac{3}{4}$ inches.

12. Fragment of the side of a vessel and portion of the foot : height, $3\frac{1}{4}$ inches.

13. Small circular rim : outside diameter, $3\frac{1}{8}$ inches.

Nos. 12 and 13 are probably fragments of the vessel of which No. 2 formed the handle.[1]

These relics are preserved in the Hawick Museum, and are here figured by kind permission of the curators.

On the same side of the hill, but several hundred feet lower down, near a place called the Crawbrae, on the farm of Hallrule, some workmen opening up a quarry discovered in a cavity of a stone, nearly 2 feet below the surface, two copper coins, one of which is said to have been a coin of the reign of the Emperor Maximinus, while the other was apparently lost before being identified.[2]

In conclusion, I may mention that no indications of fortifications on this hill are to be found on the sheets of the Ordnance Survey : but in Timothy Pont's Map of Teviotdale there may be seen surmounting the summit a symbol, which I interpret as indicating the existence of a tower. This does not, of course, imply that Timothy Pont was a more careful geographer than the officer under whose direction the

[1] I am indebted to Mr Alex Inglis, Hawick, for kindly making these measurements for me.

[2] MS. Journal of the late Walter Deans, Hobkirk.

recent survey was made; but that in his time, either the remains of the fortifications were very evident, or, more probably, the site of a tower which is believed to have stood on the slope of the hill was, in a chart on such a small scale, placed on the top.

V.

DESCRIPTION OF SEPULCHRAL URNS EXHIBITED BY COL. MALCOLM, C.B., OF POLTALLOCH. By JOSEPH ANDERSON, LL.D., Assistant Secretary and Keeper of the Museum.

These sepulchral urns were all found on the estate of Poltalloch, Argyleshire, and are preserved at Poltalloch House.

1. A very fine bowl-shaped Urn (fig. 1), measuring $6\frac{1}{2}$ inches across the mouth, widening to about 9 inches in greatest diameter, and 5 inches in height, the contour of the sides globular, and sloping rapidly inwards to the narrow flat bottom, which is defined by a slight circular ring or footstand a little more than $\frac{1}{4}$ of an inch in width and almost 2 inches in diameter over all, the interior of the ring or footstand being $1\frac{1}{2}$ inches in diameter, and the projection of the ring not more than $\frac{1}{8}$ of an inch. On the exterior circumference at the widest part of the bowl there have been four projecting loops or ears, about 6 inches apart from centre to centre, which stand out about $\frac{3}{4}$ of an inch, and are pierced horizontally by circular openings little more than $\frac{1}{8}$ inch in diameter. Only two of these now remain. The whole of the exterior surface, except the footstand, is elaborately ornamented. The rim is sharply bevelled off with a bevel to the interior of $\frac{3}{8}$ of an inch in depth. The exterior part of the rim for about the depth of the interior bevel is ornamented with from three to four irregularly horizontal lines of impressions of a toothed comb-like implement. Below this is a band $1\frac{3}{4}$ inches in width, defined above and below by a very slight moulding with an edging of slight triangular

impressions, making a wavy border to the upper and lower sides of the band, the space between being filled with a pattern of parallel lines of toothed impressions, varying from six to eight in a group, and arranged alternately in vertical and horizontal groups. In the spaces between the projecting ears immediately below this band, which form a kind of shallow concave moulding in the horizontal line between the openings in the projecting loops, the ornamentation is a series of double lines of impressions of the same toothed character, lying

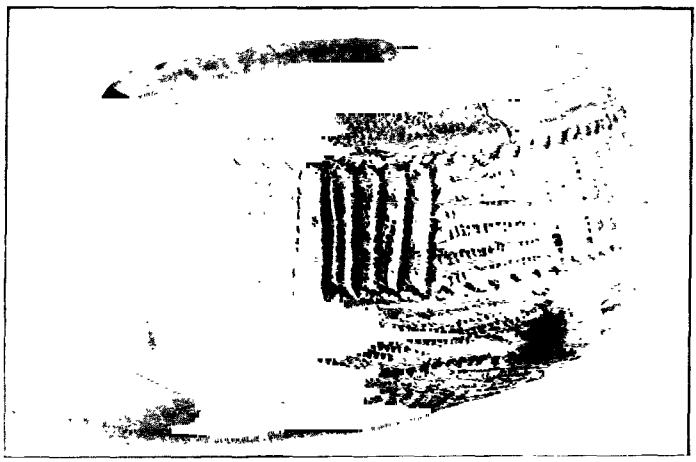


Fig. 1. Bowl-shaped Urn from a cairn at Kilmartin.

obliquely in the concavity of the moulding and meeting each other in its central line. The upper and lower surfaces of the projecting ears are similarly ornamented. Below the slight moulding from which the lower ends of the loops spring, the sloping surface of the under part of the vessel begins. It is surrounded immediately under the loops (as shown in fig. 2) by a line of oval concave impressions, somewhat less than $\frac{1}{4}$ inch in length and set close together, and by two plain scored lines of about $\frac{1}{8}$ inch in width, and the same distance apart, parallel to the border line and to each other. Then comes a

band of about 2 inches in width exactly similar to the band on the upper part of the side of the vessel, but the groups of parallel lines are more irregular in number and character. A triple moulding of two scored lines, with a line of oval impressions between, and a double band of rudely triangular or curved impressions, some of which are suggestive of a thumb-nail, surround the footstand.

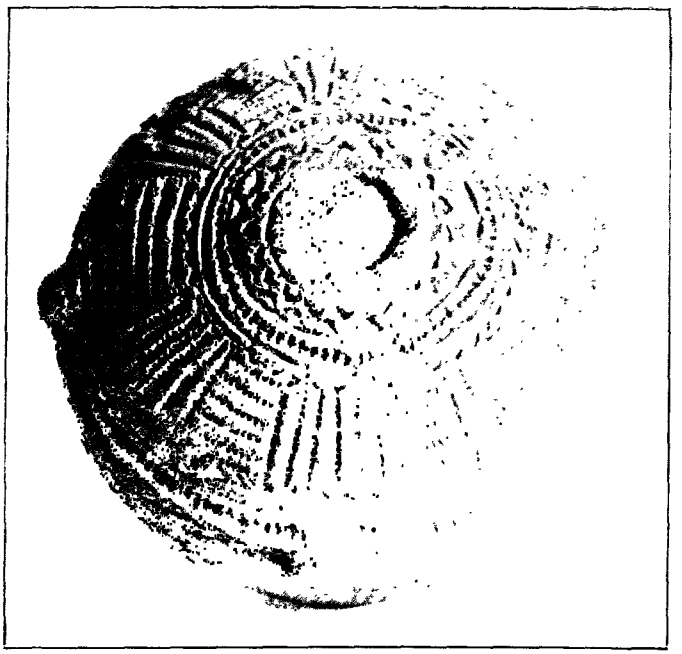


Fig. 2. Under part of bowl-shaped Urn from Kilmartin.

This urn is the one described in the *Proceedings* of the Society, vol. vi. p. 340, by Canon Greenwell, as having been found in a cist in the centre of a double circle of stones within a cairn 110 feet in diameter and 13½ feet high on the glebe at Kilmartin. The cist was 3 feet 5 inches in length, 2 feet 4 inches wide, and 1 foot 9 inches deep. It was half filled with river gravel, and the urn was covered by the gravel.

A necklace of jet beads and plates, of which 28 were found, had been placed above the urn. Another cist, with an urn of food-vessel type, (figured in vol. vi. Plate XX. fig. 3) was found at the centre of the cairn.

2. Bowl-shaped Urn (fig. 3), measuring $3\frac{3}{4}$ inches in height, $4\frac{3}{4}$ inches across the mouth, widening to about $5\frac{3}{4}$ inches, and curving in again to a flat bottom of about 3 inches in diameter, with a very slight footstand of about $\frac{1}{4}$ of an inch in width. The rim is sharply bevelled towards the interior, and the bevel ornamented with oblique parallel lines of from three to five impressions of a toothed implement. On

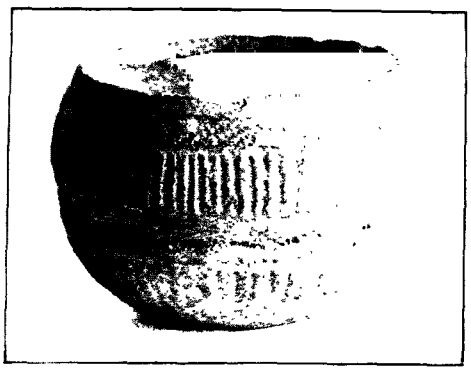


Fig. 3. Urn from central cist of a cairn at Dunraigaig.

the exterior the upper part of the rim for $\frac{1}{4}$ of an inch is plain; under that there is a band $\frac{1}{2}$ inch in width, filled with oblique lines of toothed impressions, changing to horizontal lines at one side of the vessel. Below this a band of $\frac{3}{4}$ of an inch in width is filled with parallel impressions as of a piece of twig about $\frac{1}{8}$ of an inch in diameter, placed vertically and about the same distance apart. Round the middle of the vessel is a slightly concave moulding of $\frac{1}{2}$ inch in width, with oblique lines of impressions in the hollow, and this is succeeded lower down (fig. 4) by a band of vertical impressions similar to that on the upper side, and a narrower band of oblique impressions of a toothed implement. All these bands are

separated from each other by slightly scored mouldings or borders less than $\frac{1}{8}$ of an inch in depth and slightly more in width.

On the flat bottom, which is 3 inches in diameter, within a circular footstand of very slight projection, there are three groups of three to five nearly parallel lines of very slightly impressed ornament, produced by a toothed implement, and arranged in arcs of circles, the convexities of the arcs turned towards the centre of the base of the vessel.

This urn agrees in description and dimensions with the urn referred

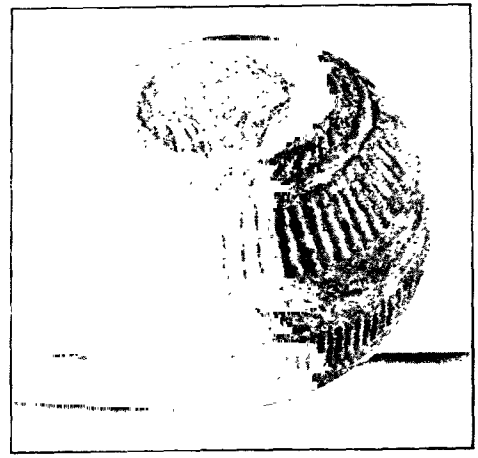


Fig. 4. Under part of Urn from central cist of a cairn at Duncraigaig.

to by Canon Greenwell as having been found in the central cist of a cairn about 100 feet in diameter at Duncraigaig. The cist was 4 feet 6 inches long, 2 feet 6 inches wide, and 2 feet 6 inches deep. On the cover-stone lay an unburnt body. In the cist were calcined bones and charcoal, the urn, and a few flint chips. Beneath this deposit was a pavement of flagstones, and under that, amongst clay, an unburnt body, in the usual contracted position. The only point left doubtful is that Canon Greenwell says the urn was "covered with ornament except on the bottom," but as the ornament on the bottom is scarcely visible

unless in a favourable light, it may probably have been overlooked at the time the urn was found.

3. Bowl-shaped Urn, measuring $3\frac{3}{4}$ inches in height, $4\frac{3}{4}$ inches in diameter at the mouth, widening to $5\frac{3}{4}$ inches at the bulge, and curving downward to a flat base $3\frac{1}{4}$ inches in diameter. The upper surface of the rim is flat and about $\frac{1}{8}$ of an inch in width. The bevel of the lip to the inside is $\frac{3}{8}$ of an inch in depth, flat and unornamented. The whole of the exterior surface is covered with ornament, and the bottom is also most elaborately ornamented. Midway in the height of the side

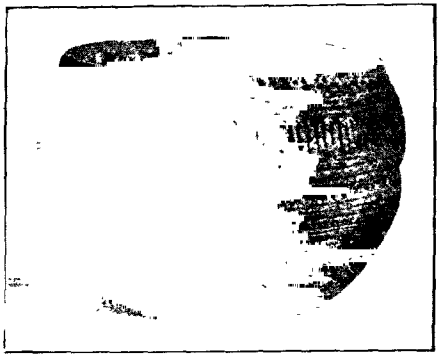


Fig. 5. Bowl-shaped Urn from second cist in a cairn at Duncraigaig.

of the vessel there is a hollow moulding $\frac{3}{8}$ of an inch in width and about $\frac{1}{8}$ of an inch in depth in the centre, along which is a line of triangular impressions, with their points turned to the left. The upper and lower parts of the exterior, divided from each other by this moulding, are treated similarly, producing a symmetrical arrangement of the decoration. Immediately under the rim is a band $\frac{3}{8}$ of an inch in depth, consisting of three rows of triangular impressions, the upper row having the points turned to the left, the second row with the points turned down, and the third row with the points turned upwards. The composite band between this upper band and the hollow moulding in the middle of the height of the vessel is $1\frac{3}{8}$ inches in width, bordered on the upper

side by three parallel horizontal lines of ornament produced by a comb-like implement, and on the lower side are five rows of the same. Between these borders is a band $\frac{5}{8}$ inch in width, consisting of short parallel lines of the same comb-like impressions set vertically, the upper and lower ends each impinging on a row of triangular impressions placed about $\frac{1}{4}$ inch apart, the points of the upper row pointing downwards and those of the lower row pointing upwards. The lower half of the exterior below the hollow moulding in the middle of the height is so

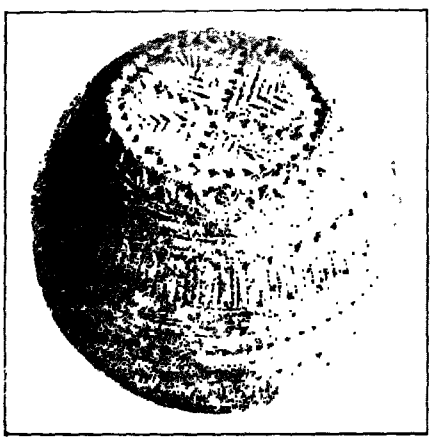


Fig. 6. Under part of Urn from second cist in a cairn at Duncraigaig.

similar that the description need not be repeated. The narrow band immediately above the flat bottom consists of two rows of triangular impressions, with a double row of comb-made lines zigzagging between them.

The bottom (fig. 6) is surrounded by a very slight circular foot-stand. Within this is a circle of triangular impressions, the points facing to the left, quartered by two diameters of similar impressions crossing each other at right angles in the centre: the points of the triangular impressions in the one diameter all face to the right, those in the two radii of the other diameter face in opposite ways to the centre. The quadrants

between each two of the four radii are filled in by lines of comb impressions placed parallel to the radii, and about equal distances from each other, meeting at an angle in the middle line of the quadrant.

The whole decoration of this urn is quite exceptional, both as regards the good taste of the general design and the boldness and dexterity with which it has been carried out.

This urn agrees in dimensions and character with the urn described by Canon Greenwell in the *Proceedings*, vol. vi. p. 347, as having been

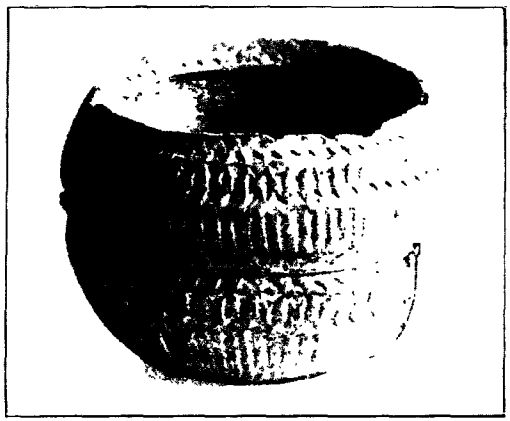


Fig. 7. Urn of bowl-shape from Barsleisnach.

found in a second cist about 22 feet east from the cist in the centre of the cairn at Duncraigaig. The cist was 1 foot 6 inches long, 1 foot 3 inches wide and the same in depth, and was partly filled with gravel. Upon the gravel was the urn, and amongst the gravel were burnt bones and a few flint chips.

4. Urn of bowl-shape (fig. 7), $4\frac{1}{2}$ inches high, 5 inches wide at the mouth, widening to 6 inches, and curving inwards to a flat bottom $3\frac{1}{2}$ inches in diameter. Like the last urn it has a concave moulding round the middle of its height $\frac{3}{4}$ inch in width, and the scheme of the ornament above and below this is much the same in character. The rim of

the vessel is ornamented both on the exterior and on the interior bevel by a double row of opposed triangular impressions. Between this exterior ornament of the rim and the concave moulding in the middle of the height of the side of the vessel is a band of ornament about $1\frac{1}{2}$ inches in width, the upper half of which is composed of an upper and lower border of opposed triangular impressions, and between them a band of vertical impressions of about $\frac{1}{8}$ of an inch in width and $\frac{1}{2}$ an inch or less in length, and about $\frac{1}{8}$ of an inch apart. Underneath this is a band of the same vertical impressions fully $\frac{1}{2}$ an inch in length and the same distance apart. The concave moulding below this has a row of opposed triangular impressions along its upper and lower margins, the points facing each other, with a narrow plain band between them. Between the concave moulding and the bottom, the ornament is a repetition of that on the band above the moulding, except that the vertical impressions are longer, and a single row of triangular impressions surrounds the margin of the base.

This urn has the name of its locality marked upon it as Barsleisnach, but no other particulars.

5. Urn of the usual "food-vessel" form (fig. 8), $5\frac{3}{4}$ inches in height and 6 inches in diameter at the mouth, widening to about $6\frac{3}{4}$ inches in diameter at the shoulder, from which it tapers to a flat bottom $2\frac{3}{4}$ inches in diameter. The rim is sharp, with a bevel to the inside of about $\frac{1}{2}$ inch in depth, ornamented with a band of zigzags produced by short impressions of a comb-like instrument, and placed parallel to each other and vertically across the depth of the bevel. The exterior surface of the rim is ornamented by a band of herring-bone impressed ornament. Between the rim and the shoulder, $2\frac{1}{2}$ inches below, the exterior of the vessel is formed in two shallow concave mouldings, with a slightly projecting moulding between them. The upper of these has the deeper curve, and is ornamented by a band of four parallel lines of impressions of a toothed implement running round horizontally, succeeded below by a band of three rows of small irregular impressions, which have one side rounded as if made by a small finger-

nail, the lower margin of the band being formed by horizontal lines of comb impressions like the upper. These composite bands of ornament are repeated over the lower part of the surface all the way to the bottom. The bottom itself is quite plain.

The exact locality of this urn has not been ascertained.

6. A portion of an Urn of "food-vessel" type, which has been at least 5 inches in height, is much more rudely ornamented with

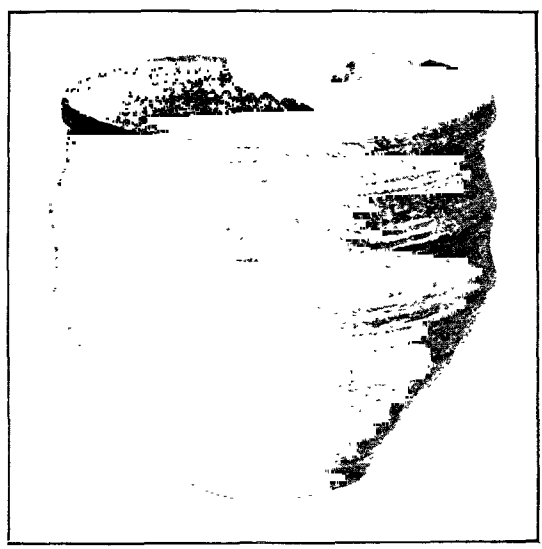


Fig. 8. Urn of "food-vessel" shape, Poltalloch.

parallel horizontal and oblique rows of comb impressions, and has a rather thick lip.

The exact locality of this urn has not been ascertained.

7. A fragment of the upper part of a large hard-baked Urn of reddish clay, nearly an inch in thickness at a distance of $2\frac{1}{2}$ inches below the lip, has on the outer part of the rim two horizontal rows of rather irregular impressions, the upper as if made by the end of a broken twig and the lower as if scooped by a finger-nail Underneath

is a band of large deep vertical flutings, each $1\frac{1}{4}$ inches in length and quite $\frac{1}{4}$ inch in width, bounded by a boldly raised rib above and below. This fragment is that described by Rev. R J. Mapleton in the *Proceedings*, vol. vi. p. 355, as having been found amongst the rubbish and soil thrown out of the third compartment of a megalithic cist or chamber in a cairn at Kilchoan.



Fig. 9. Urn of beaker type, Poltalloch.

8. Urn of "drinking-cup" or "beaker" type (fig. 9), $6\frac{1}{4}$ inches in height and $4\frac{3}{4}$ inches in diameter at the mouth, the upper part straight but slightly everted, the bulge below the straight brim slightly narrower than the mouth, and the taper below the bulge almost straight to a flat bottom of $2\frac{7}{8}$ inches diameter. It is made of a rather earthy clay, greyish-white in colour, and has a lip fully $\frac{1}{4}$ inch in thickness. The ornamentation, as usual, is arranged in zones or bands, alternating with plain bands, of which there are two, one being immediately under the

straight everted upper part and the other immediately under the greatest width of the bulge. The upper band of ornament which covers the straight everted brim consists of three parallel lines of comb-like impressions, placed about $\frac{1}{4}$ inch apart, a band of short straight impressions placed vertically, and bordered above and below by a line of similar short impressions placed two and two at an obtuse angle instead of



Fig. 10. Urn of "food-vessel" type from a cairn at Rudle.

horizontally. Underneath is a band of five parallel horizontal lines of comb impressions. A plain band of about $\frac{3}{4}$ inch in width is bordered above and below with a bold line of short irregular impressions placed somewhat obliquely. Under this is a band of four parallel lines of comb impressions, then a plain band with upper and lower border of bold impressions of short lines placed obliquely, while the lower part of the vessel has a bold band of zigzags, bordered above and below by a band consisting of triple parallel lines of comb impressions, the ornament

finishing so as to leave a plain band of about $\frac{1}{2}$ an inch in width above the bottom; the bottom also is plain.

The precise locality of this urn has not been ascertained.

9. A small fragment of the lip of a similar Urn of the "drinking-cup" or "beaker" type is prettily ornamented with a band of vertical straight lines of comb ornament, bordered by a line of zigzags placed horizontally, above which are two horizontal lines of the same ornament. The locality of this urn has not been ascertained.

10 Urn of "food-vessel" type (fig. 10), 6 inches in height and $6\frac{1}{2}$ inches diameter at the mouth, having a slight projecting moulding round the widest part at $2\frac{1}{2}$ inches under the brim, and tapering thence to a flat bottom $3\frac{1}{2}$ inches in diameter. Immediately under the rim, and above and below the slightly projecting moulding, are horizontal lines of very faintly impressed markings of comb-like ornament, and a similar line about an inch above the base. Between the upper two and the lower two of these lines are vertical lines of a twisted thong ornament, very faintly impressed, and placed irregularly from an inch to half an inch apart. This urn agrees in dimensions and ornament with the urn described by Canon Greenwell in the *Proceedings*, vol. vi. p. 350, as having been found in a cist in a partially destroyed cairn at Rudle.

This collection of sepulchral vessels from Poltalloch exhibits an unusual number of remarkable features. The ornamentation of the bottoms, and the bowl-shaped contour of several of the vessels, along with the tasteful character of the general decoration, invest the collection with quite an exceptional importance. It is to be hoped that its claims to an interest much more widely scientific than merely local will meet with appropriate recognition.

MONDAY, 13*th March* 1905.

COL. A. B. M'HARDY, C.B., Vice-President, in the Chair.

A Ballot having been taken, the following were duly elected Fellows:—

JAMES CLARK, Advocate, 10 Drumsheugh Gardens.
JAMES EDWARD CREE, Tusculum, North Berwick.
Rev. ANDREW HEWAT, M.A., B.D., Minister of Tranent.
P. KEITH MURRAY, W.S., 12 Lennox Street.
ROBERT A. C. THIRKELL, New Town, Tasmania.

The following Donations to the Museum and Library were laid on the table, and thanks voted to the Donors:—

(1) By H. W. SETON-KARR, Wimbledon.

Four Stone Axes, varying from $5\frac{3}{8}$ to $3\frac{1}{2}$ inches in length, and a Pebble, measuring $4\frac{3}{4}$ inches by $2\frac{5}{8}$ inches, indented with seven hollows, from the Banda Hills, Northern India.

Seven Arrow-heads, twelve worked Implements, and five Flakes of Flint, from the Fayoum, Egypt.

(2) By P. S. TILLARD, Lister House.

Collection of Flint Flakes, mostly unworked, from an old bed of the river Ythan at Newburgh, Aberdeenshire.

(3) By WILLIAM LAIDLAW, West Linton, through JOHN NOTMAN, F.S.A. Scot.

Small piece of dark Slate, with an incised pattern of crescentic lines and dots, found at Slipperfield, West Linton.

(4) By Angus Grant, Drumalan, Drumnadrochit.

Mass of Bog Butter or tallow, now converted into adipocere, found in the Moss of Bunloit, Glenurquhart. Mr Grant sends the following notice of the finding of this curious deposit :—

"I delayed sending the lump of tallow until I had an opportunity of seeing the spot where it was found, and getting the story of the crofter's son who found it. While crossing an exhausted part of Bunloit peat-moss about a year ago, his attention was attracted by a crowd of lapwings screaming and squabbling over a white object on the ground, on which they appeared to be feasting. When he went up to the spot he found the circular upper surface of the tallow on a level with the surrounding ground, and pecked all over by the birds. Before the moss was removed as peat, he considers that the surface was at least three feet higher than the present level. From the nature of the surface, the moss must have been removed many years ago, how many even old people cannot say. On digging out the tallow he found it was covered with several layers of bark, a fragment of which was preserved, and is enclosed in an envelope in the box. What remains of the mass is roller-shaped, quite circular, and exactly a foot in diameter, the end lowest in the ground ending in a short irregular cone. The weight now is over 20 lbs., but pieces have been cut off and given away as curiosities. The mass, it may be observed, is pierced in all directions This was probing for treasure, as there is a tradition that wealth had been got in this way. There is a family here whose forebears are said to have got money in a mass of tallow wrapped up in a yellow hide. The people themselves have always denied this. A somewhat similar find was, I am credibly informed, made in the same district some time ago, but well within living memory. In this case the material was converted into candles, but the experiment was not satisfactory. The candles sputtered and crackled, sending sparks of boiling tallow all round. They were voted as uncanny, and promptly got rid of.

"From the brown-coloured hairs found here and there, it would seem that the tallow is that of the cow. It would seem to be proof against

decay. It must have been exposed to the air, or nearly exposed, for many years; and since its being dug up over a year ago, has been lying exposed in an outhouse, yet it shows no trace of decay, and smells quite fresh."

(5) Bequeathed by Mrs D. O. Hill.

Three Helmets obtained in Italy, viz.—(1) a burgonet, 10 inches high, with nasal and hinged cheek-pieces pierced with a circle of small holes: (2) large armet, 11½ inches high, with visor of nine bars, having on the back the letters G. P.: (3) armet, 9½ inches high, with visor, and a circle of small holes on the right side.

Oak cabinet, in two parts, said to have come from Lochleven Castle.

(6) By the Right Hon. the Countess of Seafield, through Mr James Sharp, 6 Gillespie Crescent

A pair of Sheaths of the Horns of the old Wild Cattle, found in a peat-moss on the Braes of Castle-Grant, Strathspey.

(7) By the Trustees of the British Museum.

Catalogue of Greek Sculpture. Vol. iii.

Catalogue of Greek Coins—Cyprus. 8vo. 1904.

(8) By the India Office, through the Royal Society of Edinburgh.

Ethnographic Appendices to the Census of India.

(9) By W. de R. Greenwood, F.S.A. Scot., the Author

The Redmans of Levens and Harewood: A Contribution to the History of the Levens Family of Redman and Redmayne. 8vo. 1905.

(10) By the Edinburgh Bibliographical Society.

List of Books printed in Scotland before A.D. 1700. By H. G. Aldis. 4to. 1904.

(11) By J. S. Richardson.

Transactions of the Scottish Ecclesiastical Society, 1904.

(12) By Rev. Jas. W. Jack, the Author.

Glenfarg and District, Past and Present. 8vo. 2nd edition. 1904.

The following Communications were read:—

I.

NOTES ON THE PIGMIES ISLE, AT THE BUTT OF LEWIS, WITH RESULTS OF THE RECENT EXPLORATION OF THE "PIGMIES CHAPEL" THERE. By WILLIAM COOK MACKENZIE, F.S.A Scot.

The first traveller, so far as I have ascertained, who wrote about the Pigmies Isle was Dean Monro, who, in his pastoral capacity, visited Lewis about 1549. I shall quote his description in full, in modern English.

"At the north point of Lewis," he says, "there is a little isle called the Pigmies Isle, with a little kirk in it of their own handiwork. Within this kirk the ancients of that country of the Lewis say that the said pigmies have been buried there. Many men of different countries have delved deeply the floor of the little kirk, and I myself among the rest, and have found in it, deep under the earth, certain bones and round heads of wonderful little size, alleged to be the bones of the said pigmies; which may be likely, according to sundry histories that we read of the pigmies: but I leave this far to the ancients of Lewis."

George Buchanan, in his *History of Scotland*, quotes the Dean's statement with apparent conviction.

An official account of Lewis, drawn up about 1580, refers to the little kirk and the pigmies' bones, which, it says, on being measured, proved to be not quite two inches long.

The most circumstantial account of the isle is given by a Captain Dymes, who visited Lewis in 1630. He, too, had dug up some bones, but he quaintly remarks: "My belief is scarce big enough to think them to be human bones."

A Lewisman named John Morison, who wrote an account of his native island about 1680, mentions the isle and the bones, but scoffs at the pigmy theory, believing the bones to be those of "small fowls."

In his well-known description of the Western Isles at the end of the seventeenth century, Martin tells us of the small bones which had been dug up. "This," he adds, "gave ground to a tradition which the natives have, of a very low-statured people living once here, called '*Lusbirdan*' or pigmies."

The word "Lusbirdan" is clearly the modern *Luspardan*, which, both in Gaelic and Scots, stands for "pigmy." Dr MacBain is probably right in deriving it from *Lugh-spiorad*, or little spirit, though Jamieson gives other and more fanciful derivations.

In Blaeu's map, the name of the isle appears as *Ylen Dunibeg*, or Island of the Little Men. In a rough sketch of Lewis drawn by Captain Dymes, it appears as the "Isle of Pigmies," which name is also given to it by Martin, though he states that the natives (like Blaeu) called it the "Island of Little Men," a distinction with a difference. In the Ordnance Survey map of the present day, it appears as "Luchruban," which is plainly identical with *Luchorpáin*, or *Luchrupáin*, the diminutive people of Irish legend; and the full name was probably *Eilean na Luchrupáin*, or Island of the Luchrupain, the dwarfs who were complementary to the Irish *Fomhoraigh* (Fomorians) or giants. It is impossible to say when this name supplanted that of the Pigmies Isle, but not improbably it was given to the isle by Irish antiquaries, who thought they had discovered in the small bones, relics of their legendary *Luchrupáin*. Captain Dymes states that the bones had often been dug up, especially by the Irish who came to Ness for that purpose. The context seems to show that he meant natives of Ireland, and not merely Gaelic-speakers.

It may be observed that the latest contemporary notice of the Pigmies Isle appears—of all places—in an ode. Collins was evidently a firm believer in the pigmy theory, and in his *Ode on the Popular Superstitions of the Highlands*, published in 1749, the little islet at Ness, with its accepted tradition, receives honourable mention.

Early in the nineteenth century, the voice of the sceptic was heard in the land. Dr John M'Culloch roundly denied the very existence of the isle, and, moreover, based an unworthy attack on Dean Monro's veracity, generally, upon his account of it. I find M'Culloch's aspersion on Buchanan's "pious and well-informed man" reproduced in a popular handbook to the "Highlands and Islands," published in 1877: so it is obvious that the Dean's reputation for veracity has suffered most undeservedly by M'Culloch's ill-considered attack.

If for no other reason than that of restoring Dean Monro's character as a reliable writer, I am glad to have re-discovered the Pigmies Isle. I found it chiefly by means of Captain Dymes's description in a manuscript I lighted upon, when searching for material for my *History of the Outer Hebrides*. I had no opportunity at the time of making further investigations, but my brother, Mr C. G. Mackenzie, and my cousin, Dr Mackenzie, both of Stornoway, subsequently made an exhaustive search in the so-called chapel, and with some tangible results.

Dr Mackenzie has prepared a statement of their discoveries, from which I extract the salient features. The finds were disappointing, being confined to some pieces of hand-made and unglazed pottery, a number of bones, and a small quantity of peat-ash. But the structure itself is of a distinctly interesting type.

The isle lies to the north-west of the lighthouse at the Butt of Lewis. It has an extreme length of about 80 feet and an extreme breadth of about 70 feet, and is completely isolated from the mainland of Lewis only during very high tides. The surface is covered with short sea-grass. The greenness of the grass and the peculiar rounded shape of the isle make it a conspicuous feature of the landscape. The visible portion of the structure which was explored stands at the end contiguous

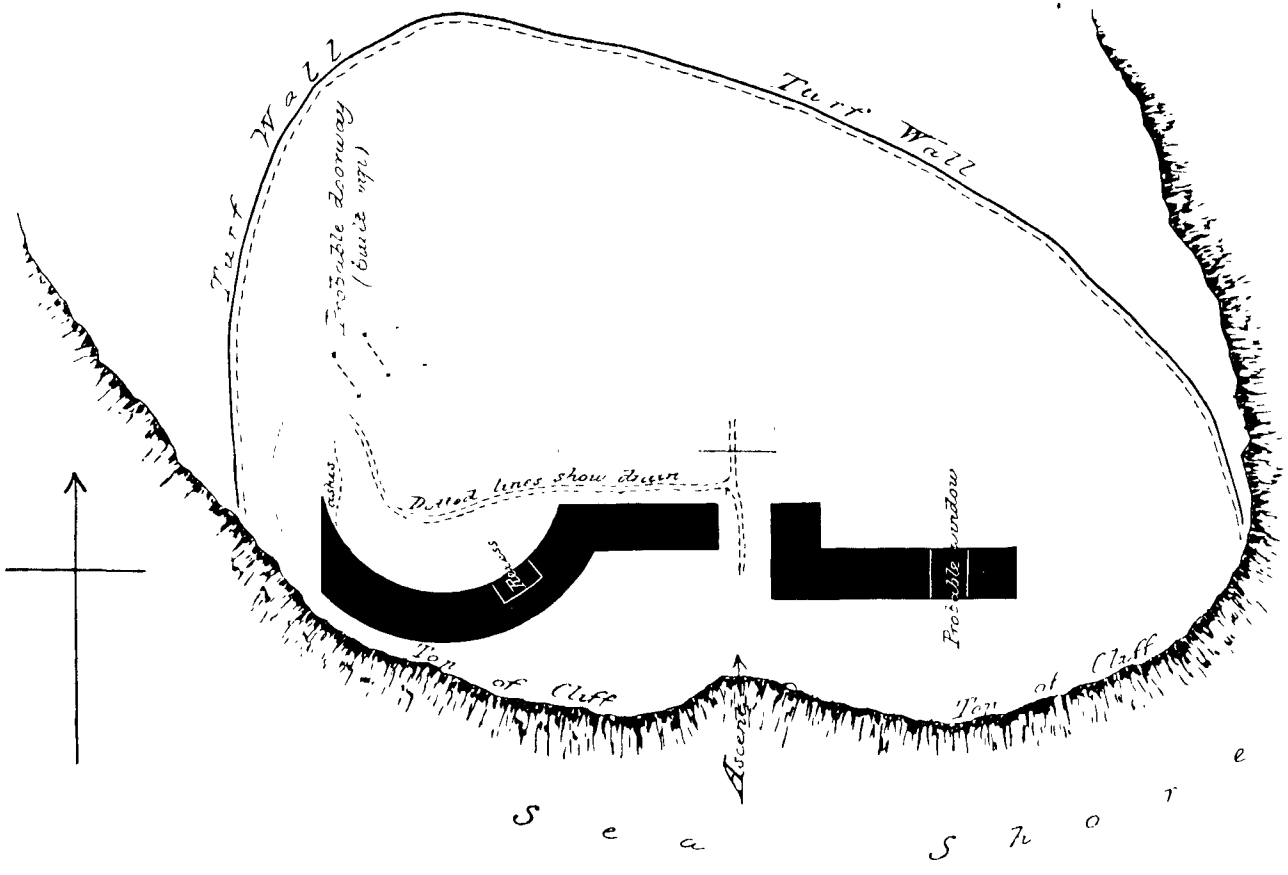


Fig. 1. Ground Plan of Pigmies Chapel, by Alex. MacDonald, C.E., Stornoway. (Scale, 8 feet to 1 inch.)

to the mainland. The long axis of the building runs almost due east and west. "Of the building itself," says Dr Mackenzie, "I found only the oblong portion, seen on the plan (fig. 1), partially exposed to view. The walls of this portion are composed of flat and neatly-laid stones, unmortared. They are 2 feet in thickness, and stand from their foundations at a general height of 2 feet. About the middle of the south wall, there is a shallow opening, 18 inches wide, forming part of the two sides and bottom of a square. It appears to have been used as a window. Its sill is 18 inches from the foundation line of the walls."

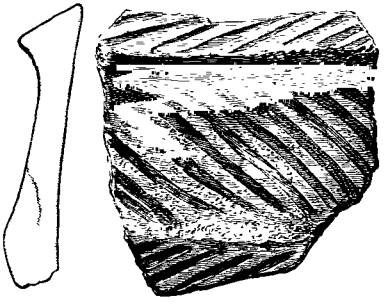


Fig. 2. Fragment of Unglazed Pottery found in the Pigmies Chapel.

This is the portion of the building known to Dean Monro and the other writers whose descriptions have been quoted. The modern investigators followed their example by digging up the floor of the so-called kirk, and between the upper layer of loam and the lower of sea-sand, they found the bones and the patterned pottery. It consists of one piece of the bottom, with part of the side, of a small vessel of reddish clay, not made on the wheel or fired in a kiln, and unglazed; three portions apparently of the sides of different vessels of dark micaceous clay, about $\frac{1}{4}$ inch in thickness, somewhat resembling the old craggans, and ornamented with rough parallel scratches, as if drawn with the broken end of a twig: and a fourth fragment (fig. 2), showing the

lip of a larger vessel, elegantly shaped, well smoothed on the inside, and the outside ornamented with the same linear striation. The loam at both ends of the layer was impregnated with a reddish material, resembling damp peat-ashes.

The part of the structure which was laid bare for the first time is described by Dr Mackenzie in detail, the gist of his statement being as follows:—

From the so-called kirk, a passage, 21 inches wide, leads due west for a distance of $6\frac{1}{2}$ feet. Its walls, dry-built and plumb, are 2 feet in height. There are two interruptions in the wall, one on its south side, where it should have abutted on the west end of the chapel, and the other on the opposite side. The former, which has a width of 27 inches, appears to have been the doorway of the structure. The niche on the north side is semicircular in shape: it has a breadth of 41 inches and an extreme depth of 30 inches. Its floor of carefully laid flat stones is about 9 inches above the general level of the passage floor. The roof of this recess appears to have been semicircular in shape.

At its western extremity, the passage opens into a roofless circular apartment about 10 feet in diameter. Its walls are very well built of dry-stone; they rise from their foundations to a height of about 4 feet. At the west of the chamber peat-ash was found, and under the floor some more of the small bones.

In the wall of this chamber is a small square recess, 17 inches high, 15 inches broad, and 19 inches deep.

The interior long axis of the entire structure (comprising the circular chamber, the passage, and the kirk) measures 24 feet 9 inches. The floor of the whole slopes from its western to its eastern extremity, the gradient being about 1 in 50.

A remarkable feature of the circular apartment and the passage is the drainage system, of which evidences remain. A carefully-built drain, composed of flat stones laid in a "V" shape, enters under the foundations where marked on the plan. From this point, it runs in front of the fire-

place in the circular chamber where the ashes were found, and curving gently, courses under the full width of the floor through the passage. Opposite the niche in the passage, it is joined by another drain of the same construction, which emerges from the floor of the niche. From this junction, it passes to the outside through the doorway, not apparently having entered the kirk at all.

The contents of the drain—a pultaceous dark-coloured deposit—were freely dotted with a pure white substance, resembling chloride of lime.

The whole structure is surrounded by what appears to have been an old turf-grown stone dyke, the diameter of the enclosure measuring, roughly, 40 feet. This dyke impinges upon the building at its west end, is close to it and the edge of the cliff on the south and east, and is furthest from it on the north-west.

Dr Mackenzie believes that the character of the whole structure has been for the first time revealed by the excavations above described, and that the roofs of the chambers and the passage between them, of which no part now remains, were probably similar to those of certain archaic buildings which he saw on Eilean Mòr in the Flannan Isles in 1896, the latter consisting of large slabs of stone forming a beehive dome, with a circular hole at or near the apex, while the passages were lintelled over with flat slabs. The further suggestion is made that the roofs of the Luchruban chambers were probably turfed, in order to afford additional security, and, possibly, more effective concealment.

I believe I am right in affirming that no exact counterpart of the Luchruban structure is known, though its general plan would appear to warrant its classification with other buildings of a primitive type found elsewhere in the Hebrides. A difficulty, however, arises in the persistence with which the oblong chamber—the only portion of the building known to previous investigators—is designated in past accounts as a "kirk" or "chapel." Moreover, it will be remembered that Dean Monro declared it was the handiwork of the pigmies themselves Probably the chamber is too small to have been

used at any time as a chapel, though it may conceivably have been utilised as the oratory of a hermit, who made the circular chamber his dwelling. The two chambers are too similar in construction, except in form, to warrant the assumption that the smaller one was added to the other at a later period. The structure, as it appears to-day, was clearly the original plan, whoever the designers may have been. Dr Mackenzie states that the chapel on Eilean Mor stands apart from the beehive buildings, but its plan is the same, its wall structure similar, and its interior dimensions somewhat less than those of the so-called Pigmies Chapel.

The local tradition at the present day connects a saint named Frangus —a name suggesting French nationality, and not to be looked for in the Roman calendar—with the pigmies of Luchruban. St Frangus is said to have been an outlaw who lived on the sands of Lionel at Ness. According to the tradition, which was recently taken down from the lips of an old resident of Ness, Frangus was unkind to the pigmies, who hanged him on a hill, which is called *Bruach Frangus* to this day. It is conceivable that this Saint Frangus may have used the structure at Luchruban as a place of retreat, thus accounting for the smaller chamber being known as a "chapel." But the most likely explanation is, that it was popularly known by that name, owing to its resemblance to the remains of chapels or oratories which were known to exist on other islets along the coast of Lewis.

The tradition now current in Ness about the pigmies themselves is not without interest. They are said to have been "Spaniards," who came to Lewis 500 years B.C. In the year 1 A.D. "big yellow men" came from Argyll and drove the little men from Cunndal (a cove near Luchruban) to the latter island; but when the pigmies got numerous, they emigrated to Europie and Knockaird in the same vicinity. They lived on "buffaloes," which they killed by throwing "sharp-pointed knives at them." Here we apparently have the story of the small dark aborigines invaded by the Goidels or Early Celts, tradition thus tallying with the results of modern ethnological research. At Cunndal

I discovered some twenty-five or more hut-circles, with stone foundations in, I think, one instance only, the others being simply mounds of turf. I could obtain no information in the district about them, except that they had been used for storing sea-weed and for fish-curing purposes. But further inquiry elicited the fact that they had existed "from time immemorial," and, according to the old Ness man, they had formed the dwellings of his pigmies previous to their migration to Luchruban.

The question naturally suggests itself: Did the pigmy story take its rise from the discovery of the small bones at Luchruban, or was it a current tradition before that discovery? John Morison and Martin seem to suggest the former theory; but Dean Monro, the earliest narrator, appears to hold the contrary view; while the tradition of the present day supports the assumption that the pigmy legend is entirely independent of the bone discoveries.

Any lingering notion that the bones recently found may have been wholly or partly human, has been completely dispelled by expert examination. I sent them to the Natural History Museum at South Kensington, to secure an authoritative pronouncement by a comparative anatomist. They were examined by Dr Charles W. Andrews, who has kindly classified them in detail. Of fourteen different specimens submitted to him, he pronounced seven to be the bones of mammals and seven those of birds. The mammals comprise oxen, young lambs, sheep, and a dog (or a fox): the birds represented are the rock pigeon, the razorbill, the greater and the lesser black-backed gull, and (?) a petrel, the bone pertaining to the last-named being a portion of a mandible, difficult of classification.

It is quite obvious that the mammals and birds formed the diet of the dwellers in the subterranean chambers. With the exception of the ox, they are all indigenous to the district, and even at the present day the gull is largely used for human food at Ness.

It is perhaps beyond the scope of this paper to discuss in detail the value of the pigmy legend, as bearing upon the origin of the remarkable

structure at Luchruban. That the tradition about the pigmies has its roots in ethnological facts is, I think, a demonstrable proposition. Allowance must be made for the exaggeration of tradition, which measures its low-statured peoples by inches, just as it measures its tall peoples by yards. Hence we have pigmies and giants to represent races who were shorter or taller than the race perpetuating the traditions.

It is fairly obvious that the pigmies of Luchruban were simply a prehistoric people of short stature and dark hair, who were contemptuously called *Dunibeg* or "little men" by their successors, a name which was inaccurately Englished and perpetuated as "pigmies." Naturally, the discovery of the small bones would give a tremendous fillip to the pigmy idea, and so the error persisted owing to the ignorance of comparative anatomy which prevailed. It is at least satisfactory to have given this myth a final burial.

The Island of Lewis offers a remarkably rich field of investigation to the ethnologist, in view of the marked diversity of its types. Dr Beddoe, whose authority will be acknowledged, suggested that one of these types, "a short, thick-set, snub-nosed, dark-haired, and even dark-eyed race," was probably aboriginal, and possibly Finnish. Have we here the descendants of the so-called pigmies? The Laplanders or true Finns have certainly some physical affinities with the short and dark type of Lewisman (a type which is but sparsely represented in the island); while the *gammar* or huts of the Lapps, as described by travellers, bear a resemblance to the Luchruban structure, as it must have been originally designed. Customs lingered in Lewis as recently as the eighteenth, or even the nineteenth century, which have elsewhere been regarded as peculiar to Lapland. And Professor Sven Nilssen[1] shows convincingly, as I think, that the pigmies of tradition and the dwarfs of the Sagas belonged to the same race as the Laplanders of the present day. Moreover, the well-authenticated traditions in Shetland about the Finn-men apparently offer corroboration of the view that the "little men" of these islands were of

[1] *The Primitive Inhabitants of Scandinavia.*

Finnish or Lapponic origin.[1] The Firbolg, the short dark men of Irish tradition, who were driven from Ireland to the Hebrides by the Tuatha de Danaan, represent, not improbably, the same race. Dun Fhirbolg in St Kilda may be of some ethnological value.

It is a noteworthy fact that while Highland folk-lore is full of the *Fomhoireun* (the Irish Fomorians) or giants, there is a curious absence of the complementary *Luchrupáin* or dwarfs. How is this to be accounted for? May it not be that they are represented by our old friends, the fairies, who, by the way, are sometimes called *Daoine Beaga*, the ancient name of the Pigmies Isle?

It is impossible to elaborate this suggestion here, but I may mention one fact concerning the Lewis fairies. One of their names is *Muinntir Fionnlagh*, translated as the Finlay people, a title which, as applied to fairies, has baffled Lewis folk-lorists. I venture to suggest that this name means "the little Finn people," and that it links the Finnish aborigines with the "good little people" of fairy lore who dwell in the bowels of green hills like Luchruban, and practise uncanny arts like the Lapp wizards.

[1] It may be observed that in Foley's dictionary but not in O'Reilly's one of the Irish names for a pigmy is *Leppuin*.

II.

REPORT ON THE SOCIETY'S EXCAVATIONS OF FORTS ON THE POLTALLOCH ESTATE, ARGYLL, IN 1904-5. BY DR CHRISTISON, SECRETARY. RELICS DESCRIBED BY DR JOSEPH ANDERSON; PLANS TAKEN BY MR THOMAS ROSS, ARCHITECT.

The Council of the Society having resolved that it was desirable to excavate several Forts in the Crinan district which had been described by me at the April meeting last year,[1] a grant was made from the Fund for Excavations on Native Sites furnished to the Society by Mr Abercromby; and leave having been freely given by Colonel E. W. Malcolm, C.B., of Poltalloch, the proprietor of the ground, operations were begun on the 5th May 1904, and continued uninterruptedly till 28th January 1905.

The great distance of the locality precluded superintendence, in our usual manner, by regular visits from Edinburgh, but the knowledge of the sites acquired by me in 1903 made it easy to direct Mr Alexander Mackie, our experienced Clerk of Works, whose weekly reports gave all the information that was required as to the progress of the excavations. Visits were also made in the course of the operations by Lieut.-Col. M'Hardy, C.B., V.P.S.A. Scot., by Mr Thomas Ross and his assistant Mr G. W. Tod on three occasions, and finally by Mr Abercromby when the work was completed.

The Report is based on Mr Mackie's Notes and Weekly Letters, and on Mr Ross's Plans: and the Illustrations are from photographs by Mr Mackie.

1. ARDIFUAR.

Three miles W.S.W. of Kilmartin, 500 yards N. of the western bay on the north side of Crinan Loch, this fort is placed on a site

[1] "The Forts of Kilmartin, Kilmichael Glassary, and North Knapdale," *Proc.*, xxxviii. 205.

unique in the county. Instead of being on the top, it is at the bottom of a hillock, whose eastern slopes completely command it from a distance of 35 yards, and it derived no strength from nature unless on one side,

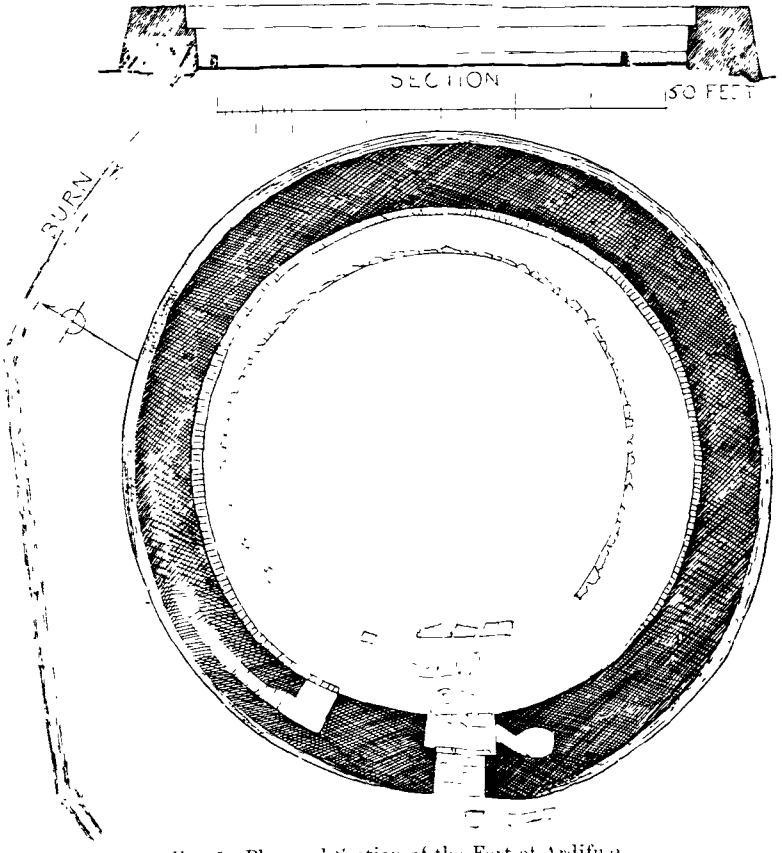


Fig. 1. Plan and Section of the Fort of Ardifuar.
by Thomas Ross, Architect, F.S.A. Scot.

where there may have been a marsh before the days of dramage. From the sea the ground rises gently to a height of 100 feet at the site, and the abrupt rocky hillock, Dun an Fheidh, that dominates it, is 80 or 90

feet higher. A brisk little rill runs round the north side of the fort within a few yards of the wall, and would afford an ample supply of water to the inhabitants.

The work, which lasted from 5th May to 13th June, consisted mainly in clearing out debris 4 or 5 feet in depth from the interior, a very disagreeable operation, as the area had been used for fifty years for the burial of dead cattle. Some debris had also to be removed from the outside, but only on the western side, as on the east the wall stood quite unencumbered.

The Wall is almost circular, and is 10 feet thick at the base, but diminishes to less than 7 at a height of 10 feet, owing to the considerable batter of the outer face (fig. 1, Plan by Mr Ross, and 2, 3, General Views). The present height varies from about 3 to 5 feet on the north-east side, and from 6 to 10 on the south-west side. The inner face has a scarcement 5 feet high and 12 to 18 inches wide, which is not built against it, but is an integral part of the wall. According to Mr J. S. Grant Wilson, of H.M. Geological Survey, 95 per cent. of the stones consisted of epidiorite and the rest of pebbly quartzite, the blocks on the eastern side being large and of epidiorite, while on the western side the wall was built of comparatively small and medium-sized blocks.

The single Entrance, which is on the south-west towards the sea, stands to a height of from 3 to 5 feet, and is of superior masonry. It consists of an outer and an inner part (figs. 4 and 5), the first being 6 feet in length and breadth, the second, behind rebates of 18 inches, being 9 feet wide, and only 4 in length. A slab, 6 feet long and 6 inches broad, set on edge, and projecting 12 inches above the floor, forms a sill between the rebates. The floor is irregularly paved with flagstones.

Cell at the entrance.—On the east side of the inner passage a rectangular opening 2 feet above the floor, and measuring only 2 feet 5 inches in height and 2 feet in width (fig. 5), gives access to a descending flight of five steps leading, 3 feet 6 inches lower down, to a very small cell 3 feet long and 2½ wide, and 7 feet high, with approximating sides



Fig. 2. Ardifuar from the north-west.



Fig. 3. Ardifuar from the south-west.

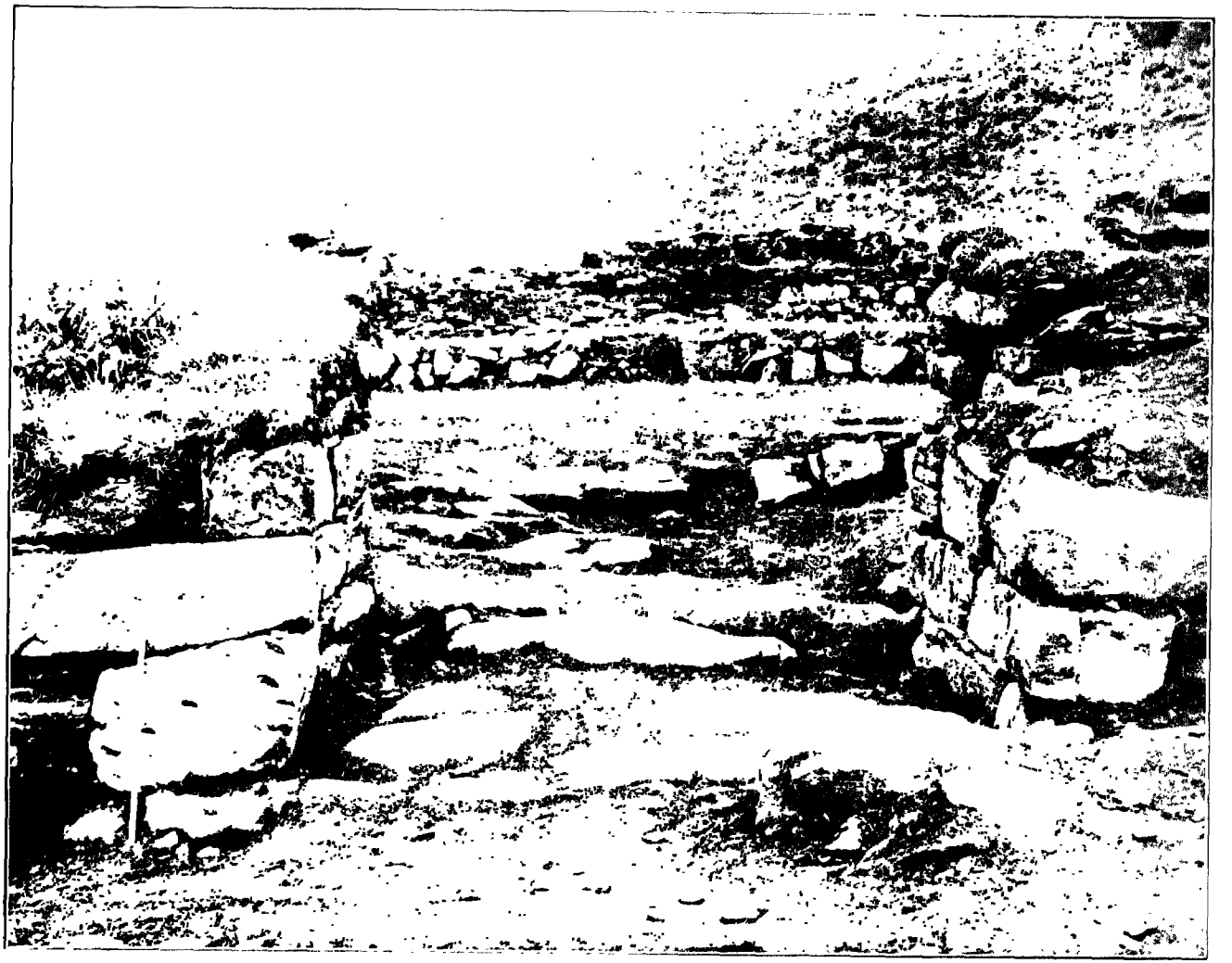


Fig. 4 Entrance to Ardifuar from the outside.



Fig. 5. Entrance to Ardifuar from the inside.



Fig. 6. Stair in the wall of Ardifuar.

and a floor of sand. If this was intended for a guard chamber, it seems to be most inconveniently planned for the purpose.

Staircase.—Twelve feet west of the entrance a rectangular recess, 5½ feet wide, gives access to a staircase in the thickness of the wall (figs. 3 and 6), which doubtless led to its top. The lower 13 steps lead to a short passage, where a second flight begins, of which only 3 steps

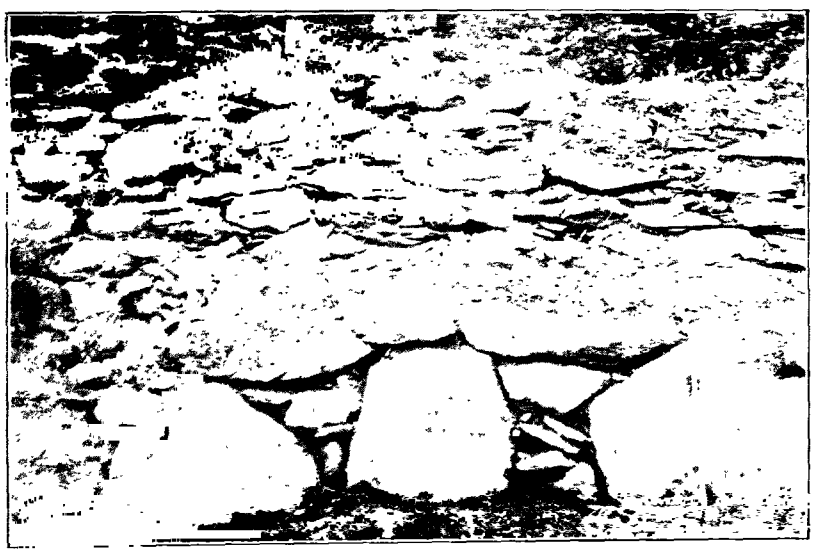


Fig. 7. Part of the Secondary Wall in Ardifuar.

remain. The inner casing of the wall stands to a height of only 6 feet, and the outer casing is quite gone. The steps, as Mr J. Grant Wilson specially remarked, are of undressed epidiorite, carefully laid, with very perfect side-pinning.

The Interior.—The area is very nearly circular, and averages 65 feet in diameter at the base and 68 above the scarcement. The flat floor has a fall of about 1 foot in level southward. Its surface is the natural gravelly soil, except near the entrance, where the flagging is prolonged

for 9 feet into the interior. Nothing was found to confirm Miss Maclagan's supposition that a covered way passed from the entrance through the area (*Hill Forts*, etc., p. 42, and pl. xix.).

Secondary Walls.—A wall of large slabs, set on edge, with small pinning stones (figs. 2, 3, 4, 7), runs round the interior, near the fort wall, but not concentrically, as the interspace varies from 3 to 9 feet in width. This space was filled with small stones and earth, with a few larger stones. The wall is about 2 feet high, and the slabs are 2 to 3 feet long and about 1 foot thick. Mr Grant Wilson estimated that 30 per cent. of the blocks were pebbly quartzite.

Outside, to the east of the entrance, and projecting a little way in front of it, was another wall of slabs on edge, running parallel with the fort wall 2 feet in front of it, and 12 feet in length.

Description of the Relics. By Dr Joseph Anderson.

The relics found in Ardifuar are as follows :—

Polished Axe of indurated clayslate, 6 inches in length by $2\frac{3}{4}$ inches across the middle, part of the cutting edge and about half of the height of one side roughly chipped away

Four Whetstones of sandstone, one being 6 inches in length by $2\frac{1}{4}$ inches in breadth, another slightly less in size, and the other two broken.

A Polisher of quartzite, measuring $4\frac{1}{4}$ inches in length by $2\frac{1}{4}$ inches in width.

A large Mould of greenish micaceous schist (fig. 8), measuring $13\frac{1}{2}$ inches in length by $10\frac{1}{2}$ inches in width, and 3 inches in thickness, having on one face moulding cavities for (1) a straight bar over 6 inches in length, one end of the cavity being broken away and the other end slightly damaged, the section of the cavity being nearly half an oval, $\frac{3}{4}$ inch in width and slightly over $\frac{1}{2}$ inch in depth; (2) an object like a mill-rind, $7\frac{3}{4}$ inches in extreme length, $1\frac{1}{2}$ inches in width in the middle, the extreme depth of the cavity being about $\frac{3}{4}$ inch, and the extreme width of the projecting horns at the ends being $4\frac{1}{4}$ inches, and the depth and

thickness at the points about $\frac{3}{4}$ inch: (3) an object like a broad curved sickle, measuring about 9 inches along the curve, $1\frac{1}{2}$ inches in width at the one end and slightly less than an inch at the other, the depth of the cavity in the middle not more than $\frac{1}{2}$ inch, thinning to the sides. This mould does not seem to be capable of being used as a closed mould with another half fitted over it: and as the middle parts of the cavities are worn quite smooth, it may have been a mould for shaping malleable-

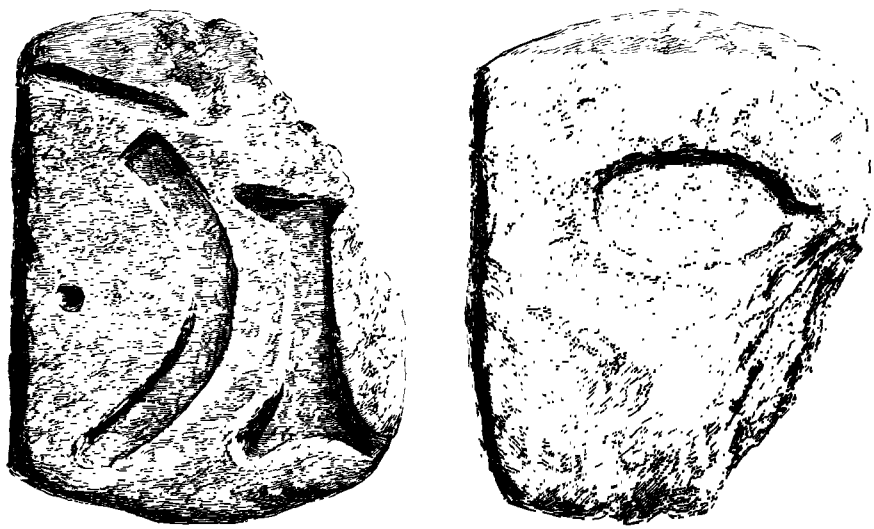


Fig. 8. Obverse and Reverse of Stone Mould found in Ardifuar. (½.)

iron things in, like the stone moulds for crusies that were till quite recently used in most country smithies. On the reverse side of the stone is another moulding cavity for a flat oval object $4\frac{3}{4}$ inches in length by 3 inches in width, and scarcely more than $\frac{1}{4}$ inch in depth, with the remains of a cavity as if for a straight rectangular handle about $\frac{3}{8}$ inch in thickness in the middle of one end. A similar oval mould is among the relics from Dunadd.

A Whorl of micaceous sandstone, $1\frac{3}{4}$ inches in diameter.

Two thin circular Discs of stone, perforated in the centre, and one more oval than circular.

Fragment of a Crucible, of the same cup-shaped form as the largest one from Dunadd.

Four fragments of Pottery, three of which are coarse, thick, hand-made, and badly-fired vessels with turned-over lips, the fourth of a greyish-white paste, wheel-made, and with a roll-moulded everted lip.

Small fragment of the red lustrous Ware of the Romano-British period, popularly known as Samian, with embossed decoration.

Small Ring of bronze, $\frac{5}{8}$ inch in diameter.

In this collection of relics from Ardifuar we have evidence in the small fragment of Samian ware and the wheel-made pottery that the occupation of the fort came down to the Roman period at least. Although the presence of the polished stone axe may appear to be suggestive of neolithic times, it is an isolated object in the group of relics, of which the general character is certainly not neolithic; and it must be remembered that polished stone axes have not unfrequently been found in the relic-bed in Roman forts, both in Germany and in England.[1] One was also found in the fort at Abernethy, in which all the other objects were of the Iron Age.

Remarks.

This fort was described by Miss Maclagan (*op. cit.*, p. 42) as the Broch of Ardafure. Its claim to be a broch, however, seemed very questionable, even before it was excavated. As formerly explained (*Proc.*, xxxviii. 220), not only did it greatly exceed in size the largest known broch, but the wall was narrower than that of any known broch, and there was no trace of a gallery at a height of 10 feet from the ground. To these reasons we have now to add the size of the entrance. An invariable characteristic of the brochs is a long narrow entrance. In no example in the Highlands, Orkney or Shetland does

[1] *Excavations on the Romano-British Sites at Wilderspool and Stockton Heath*, by Thos. May, p. 22; L. Jacobi, *Das Römerkastell Saalburg*, p. 412.

the width exceed 4 feet; and even in the Lowland *Etinshold*, the largest of all the brochs, it is only 4 feet 9 inches. At Ardifuar the width of the outer and narrowest part is 6 feet, and that of the inner part 9 feet. The total length of the entrance, on the other hand, is only 10 feet—several feet less than in any of the broch-entrances.

A considerable number of the forts in Argyll are circular, but, besides Ardifuar, only one has been excavated—*Suidhe Chennaide*, near Loch Awe (*Proc.*, xxv. 117). Although it was only preserved to a height of 5 feet, the evidence, as far as it went, was entirely against the supposition of its being a broch: therefore, as yet the only known broch in the county is Tirefour, on the island of Lismore.

The Argyllshire fort that seems to resemble Ardifuar most closely is the South Fort of Luing, partially excavated by Dr Allan Macnaughton in 1890 and 1892 (*Proc.*, xxv. 476, xxvii. 375). It differs from Ardifuar in being oval instead of circular, and in its wall being thinner at the sides than the ends, instead of being of equal thickness all round; but these differences evidently depend upon the nature of the sites, the one being on a narrow ridge and the other on level ground: and the two forts agree in their wide entrances, and in having staircases in the thickness of the wall leading to the top.

2. DUNTROON.

The excavation of Duntroon was specially desirable, as it had the reputation of being a vitrified fort, and the greatest variety of opinions have been expressed concerning even the most elementary facts regarding vitrified forts, ever since John Williams first described them a hundred and thirty years ago, as the following brief analysis of the leading opinions will show.

Opinions of various Authorities on Vitrified Forts.

1. Position of the Vitrifaction.

John Williams, mineral engineer (*An Account of some remarkable ancient Ruins lately discovered in the Highlands and Northern Parts*

of Scotland, 1777). From two sections made through the wall at Knockfarril, Williams concluded that it had been completely vitrified throughout, although it had entirely fallen down in ruins. This was the only fort he saw in which the whole wall had been run into a solid mass. At *Craig Phadrig* he observed, without excavating, that two vitrified walls surrounded the fort, the outer one being specially interesting as the only instance he saw of a wall not entirely ruined, some parts 5 feet high still sticking to the bare rock.

Dr John Jamieson (*Trans. R.S. of Literature*, 1827, from observations made about 1790). He saw *Finaven* advantageously, when the tenant was carting away a part of the wall, but his description is vague and contradictory. In one passage the wall is said to be regularly built, 10 to 14 feet high, 20 to 30 broad at the base, and vitrified: in another, it is stated that "the irregular concrete mass formed a buttress on each side for the regular intermediate wall"; also that parts, from top to bottom, afforded no vestiges of fire. At *the Laws* he observed two walls of vitrified matter, as perfect as at Finaven.

James Neish, Esq., of the Laws (*Proc.*, iii. 440–54, 1862), made extensive excavations at the Laws, and says that the vitrified masses were only found as a backing to the wall faces. No actual vitrified walls.

Dr John Stuart (*Proc.*, viii. 145), from observation of many examples, doubts "whether the vitrified portion was in general anything more than a central wall, buttressed by external masses of stone on each side, or in some cases the foundation for a superstructure of ordinary walling.

Dr R. Angus Smith (*Proc.*, ix., xi., xiii., and *Loch Etive and the Sons of Uisnach*, 1879), from excavations at *Dunmaesniochan*, and observation of other examples, concludes that the vitrifaction is only at the bottom to a height of 5 feet, and generally only on the outside of a dry-stone wall.

Mr John Honeyman (*Trans. Glasgow Arch. Soc.*, 1868, and part i. vol. 2, 1879), from general observations, concluded that the vitrifaction is generally less perfect towards the outside than in the centre; and

from excavations at *Caisteal Aoidhe*, found in a wall 5 to 7 feet high, that the vitrifaction at all points was wedge-shaped, widest at the top, and resting at the sides and below on rubble walls.

Dr Edward Hamilton (*Arch. Jour.*, xxxvii., 1880, p. 227) found, by observation and some digging at *Arka Uskel*, that vitrifaction was traceable all round. In a section where the wall was 7 feet high, the lower 3 feet was of waterworn boulders unaffected by fire, and the vitrified mass above was almost untouched by fire in the centre. At *Eilean na Goar* vitrifaction was seen on the wall-face, wherever not concealed by vegetation. One mass *in situ* was vitrified on both sides.

Mr James Macdonald (*Huntly Field Club Trans.*, 1886, Suppt., July 1887) made two sections through the *Tap o' Noth*. In one, where the vitrifaction was most visible, it diminished from above downwards (and only penetrated a few feet, as he subsequently stated to me). In the other there was no vitrifaction at all in the rickle wall, which was 12 feet high and 20 wide at the base.

II. Opinions as to the *modus operandi*.

Williams. The wall was vitrified within a mould, exactly fitting it, of walls of sods, by fusing successive layers of combustibles and stones, the mould being raised *pari passu*.

Hamilton thought that the heat must have been applied at the sides and top of the wall.

Honeyman and *Macdonald* concluded that the heat was applied at the top only.

Dr John Macculloch (*History of the Highlands*, 1824, ii. 237) says that the rocks were brought from a distance in the examples he saw, proving that the builders knew which rocks were fusible.

III. Opinions as to the Intention.

Pennant. Not intentional, but due to volcanic action.

Lord Woodhouselee. Not constructive, but caused by conflagrations at the hand of enemies.

Several Authors. The result of peat fires for cooking or signalling.

Williams. To act as a cement, before the use of lime was known in this island.

Angus Smith. To prevent an enemy from pulling out stones from the bottom of a wall, and so bringing the whole down. Hence the vitrified part never exceeded the height of a man, and the upper part was left loose, so that the stones could be hurled at the foe.

Honeyman. The effect seems altogether out of proportion to the result, as, after all, the wall was weak and easily undermined.

From this extraordinary conflicting mass of evidence and opinions, we can only conclude that there was a great variety in the situation of the vitrifaction, in the position and mode of application of the heat, and perhaps even in the object.

Description of Duntroon, and the Results of our Excavations.

The site is at the head of the eastern of the three bays on the north side of the Crinan Loch, about 100 yards from the sea, on the flat summit of a narrow ridge that rises gradually from the margin of the bay to a height of nearly 100 feet. The ridge continues to run for a considerable distance in a north-easterly direction, after a dip of 15 or 20 feet at the north end of the fort. Eight or ten feet below the summit a natural terrace, varying in width from 10 to 50 feet, passes round on the north, east, and south, but runs out at both ends on the west at the edge of a straight precipice, which falls on a pleasant green valley or hollow, between the ridge and a corresponding one to the west. To the east, the descent is steep to a level field. The approach from the sea along the ridge, although not steep, is much encumbered by projecting rocks. On the whole, the position is very strong, the easiest access being from the north, where, however, an attack could only be made by a very narrow front.

The defences consist of a main work enclosing the summit, a wall surrounding the terrace, an extra wall at the north end and two at the south end (Mr Ross's plan, fig. 9).

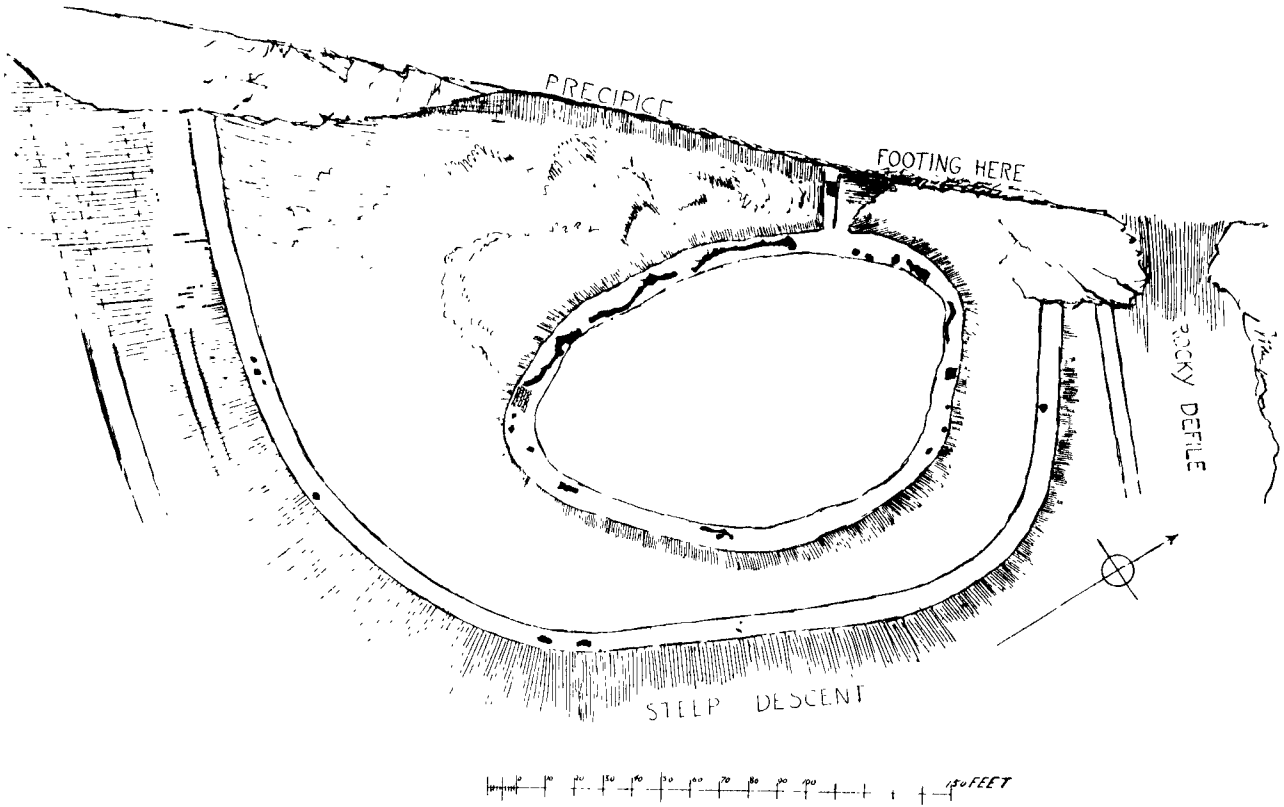


Fig. 9. Plan of the Fort at Duntroon, by Thomas Ross, Architect, F.S.A. Scot.
(The black patches on the walls indicate vitrifaction.)

The main work consists of a single wall, enclosing a nearly level oval area of 140 by 90 feet. The wall, as usual in the hill forts, is built at the edge of the summit and partly down the slope, which has contributed to its ruinous condition. Notwithstanding the great natural strength of the west side, the wall seems to have been as strong there as at the other more accessible sides. It stood here retired



Fig. 10. Remains of the outer face and rubble core of the Wall, Duntroon.

some 20 to 40 feet back from the precipice, at the top of a steep slope down to its edge.

The determining of the structure of the wall was no easy matter owing to its extremely dilapidated condition, but by removing the debris all round and getting down to the foundation, it was ascertained that the wall had consisted of an inner partially vitrified face, an outer built face, and a core of rubble (fig. 10).

Vitrified masses were found nearly all round the inner face: chiefly on the west, where they were several feet in length and height, and averaged 2 feet in depth or thickness, and were almost contiguous. Little remained on the east, somewhat more at the north-east corner, but at the north-west it was again much in evidence. Opposite all the defective points, however, masses were found lying on the slopes, and in such quantity as to leave little doubt that the vitrifaction had been nearly continuous round the inner face. Curiously enough, the vitrifaction seems to have been most extensive on the naturally strong west side. Not only was it best preserved there *in situ*, but considerable quantities had rolled down and lay at the foot of the precipice.

The vitrified masses generally stood upon the solid rock, but there were considerable stretches where they were founded on from 1 to 2 feet of stones unaffected by heat.

That the *central core* had not been vitrified was evident in places where it had not entirely fallen away, and because in the vitrified masses themselves the effects of heat were less and less manifest towards the centre of the wall.

That the *outer face* also had not been vitrified was indicated by one or two courses of an outer facing of masonry remaining round most part of the circuit. At the south-west corner three courses were found in a stretch of 9 feet (fig. 10). This masonry was unaffected by heat.

The width of wall at the base was 8 feet, and it was calculated that only about one sixth or seventh of its whole substance had been vitrified.

The fortified Terrace.—The well-defined terrace, which sweeps round three sides of the main work at a lower level of 8 or 10 feet, varies in width from 20 feet at the north end to 10 on the east side and 50 at the south end, even although it is narrowed there by the projection upon it from the foot of the main fort of a rocky platform. At this western end it terminates by a rough descent to the precipice.

The defence of the terrace consisted of a wall carried round at both ends to the precipice. The great mass of the wall lay in ruins upon the

slope, but here and there remains existed at the edge, which, with traces of the foundation of the outer casing on the slope, enabled a width of 6 feet to be determined. A very few vitrified masses were found either at the edge or on the slope, where they could not have fallen from the main work.

Advanced Walls at the north and south ends completed the defences. That at the north end abutted on the face of a rock above and near the precipice, 10 feet in front of the terrace wall, and diverging outwards till the interval was 20 feet wide, ended, after a course of 50 feet, without trending inward so as to form a closed annex. The two at the south end began at the edge of the precipice and circled round concentrically with the terrace wall for 150 feet, when they were lost on the eastern slope. The inner interspace thus formed was 15 feet wide and the outer one 20, and in their present condition their eastern flanks are quite open. The width of all these walls was only 4 feet 6 inches, and there was no trace of vitrifaction about them. They were all completely ruined.

Probable Entrance.—At the point where the main wall comes nearest to the cliff a difficult zigzag ledge leads from the green hollow up the precipitous face to the wall. No passage could be traced through the wall, but a large vitrified mass, apparently *in situ*, 12 feet in front of it, may have had to do with the defence of an entrance here. No sign of an entrance could be seen anywhere else.

The Interior.—The area of the main work is fairly level, with a slight fall at the north end. It was excavated everywhere down to the rock, which crops out in many places, and is nowhere more than a foot or two below the surface. No sign of a well, cistern, or building of any kind was to be seen.

Chief dimensions.—The extreme length of the fortress, including the walls, is 360 feet; the width about the middle 120 feet, and towards the south end 190 feet. The area of the main work measures 140 by 90 feet, but the habitable space would be about doubled by including the terrace.

Reports on the Vitrifaction, by Mr Grant Wilson, H.M. Geological Survey, *and on its Chemical Composition*, by Mr Boston Harley, chemist, Carron Ironworks, have added materially to our knowledge, and are given in full at the end of the paper.

By the kindness of Dr Horne, Director of H.M. Geological Survey for Scotland, Mr Grant Wilson visited the fort, and ascertained by repeated sections that the rock in the area was affected by heat to a distance of at least 12 feet from the wall all round, while on the outside it was only affected for 3 feet. These facts confirm the results of our excavation, showing that the heat was applied mainly, if not entirely, from the inside, for the comparatively small signs of heat outside might be due to the combustibles falling over. Besides, it was not likely that any attempt would be made to vitrify the large blocks forming the outer face. It seems to be proved also, from the mode in which the heat was applied, that the vitrifaction was intentional.

Mr Boston Harley's analysis, which was obtained at the suggestion of Mr J. R. MacLuckie, F.S.A. Scot., is also of great value, as it proves that no flux was used, contrary to the general belief on the subject.

Conclusions.

It is remarkable that while the early authorities found the vitrifaction of the walls in the various examples to be complete in one case, and in the others to be either at the bottom, or at the top, or on both sides, or on the outside only, our investigation, instead of confirming any of these, proves that at Duntroon it was only on the inside.

Other interesting results are, the proof that a vitrified wall may have an outside casing, well built, of good-sized blocks unaffected by fire, that the heat was applied from the inside of the fort, that it was intentional, and that no flux was used. A decided advance has therefore been made in our knowledge of the subject, although much remains to be learned. The purpose of vitrifaction, considering that it was applied in so many different ways, remains a mystery, which perhaps excavation cannot be expected to solve. At Duntroon it is specially difficult to understand

why men who could build a good stone face on the outside, should not have done the same on the inside, where the height was much less, and the quality of the masonry did not require to be so good.

But our work at Duntroon has contributed somewhat to the solution of the perhaps more interesting question:—Can the vitrified forts be differentiated in point of date from the ordinary hill forts? That there may be a difference seemed to be possible from their distribution. Williams supposed that they were confined to the counties of Perth, Forfar, Inverness, Nairn, and Ross, but they have since been met with in Argyll and Bute; and it is specially noteworthy that a group of six forts on the confines of Argyll and Inverness, quite isolated from other forts, are all marked "vitrified" on the O.M. Unfortunately no description has yet been published of these.

But the relics found at Duntroon are perhaps more suggestive. It is certainly remarkable that in the four forts in the district excavated by us, flint articles, three of them of neolithic type, were found only at Duntroon; and that, while all the thirty-six querns (fig. 11) discovered there were of the saddle type, of the fifty found at Dunadd, only three were of that kind, and all found at Ardifuar and Druim an Duin were rotary querns.

It is eminently desirable that some of the more completely vitrified forts should be excavated, such as the two at Arisaig and the one at Carradale, where there is a thoroughly vitrified wall, 70 feet long and 5 feet high. Knockfarril might even be profitably re-excavated, as it is reputed to be the most completely vitrified of them all; and Williams' excavation, confined to a single section across the fort, cannot be regarded as sufficient.

Description of the Relics. By Dr Joseph Anderson.

Besides the saddle querns above mentioned, the relics from Duntroon consist of the following:—

Scraper of grey flint, $1\frac{7}{8}$ inches in length, $\frac{3}{4}$-inch in width at the worked end, and tapering to less than $\frac{1}{4}$ inch at the butt end.

Scraper of pale grey flint, $1\frac{1}{4}$ inches by $1\frac{1}{8}$ inches, with semicircular edge and thick butt.

Scraper of bluish grey flint, $1\frac{3}{4}$ inches by $1\frac{1}{8}$ inches, with rounded edge and slightly convex sides, one having the original chalky surface of the nodule.

Core of flint of conical shape, $1\frac{1}{8}$ inches in diameter and an inch in height.



Fig. 11. Grain-rubbers or Saddle Querns, Duntroon.

Ten unworked flakes and chips of flint.

These flint implements and flakes were found here and there in the pockets of soil retained in the hollows of the uneven rocky floor of the fort.

Piece of coarse jet or lignite, about $1\frac{1}{2}$ inches square and $\frac{1}{8}$ inch in thickness. One of its sides shows marks of having been cut partially through and then broken off, and another retains traces of having been rubbed smooth.

Hammer-stone or Pounder of granite, $3\frac{3}{4}$ inches by $3\frac{1}{8}$ inches, abraded

by use on three of its sides; another of greyish quartz, 4 inches by $3\frac{1}{8}$ inches, abraded by use on five sides; another of similar stone, $3\frac{1}{2}$ inches by $2\frac{7}{8}$ inches, abraded by use on three of its sides; another of grey quartzite, $2\frac{3}{4}$ inches by $2\frac{1}{2}$ inches, abraded on two sides only; another of white quartz, smoothed on one side.

Six oval or oblong water-worn Pebbles, abraded by use on one side, or showing use on one edge or surface, varying from about 5 inches in length to about 3 inches in length, and about the same in breadth.

Four Whetstones or Polishers of sandstone and quartzite, from $5\frac{1}{2}$ to 4 inches in length.

Flattish oblong Pebble of sandstone, $8\frac{3}{4}$ by 3 inches, with a notch in each side nearer one end than the other, and a picked out hollow midway between the notches, probably a Sinker.

One specimen of the vitrifaction from Duntroon is interesting, as it has run down upon a shell-heap at the base of the wall and licked up a number of limpet and cockle shells, of which very perfect casts remain in the solidified mass.

Report on the Vitrifaction at Duntroon Fort.

By J. S. Grant Wilson, H.M. Geological Survey.

What remains of the original wall of the fort—now in a fragmentary condition—is wholly composed of blocks of epidiorite, resting on the mass of epidiorite on which the fort stands. This epidiorite is of the vesicular slaggy type which will melt at a comparatively low temperature. Both inside and outside the wall the rock *in situ* has been under the action of fire, and its usual dull green tint has been altered to a dull red brown. In cross-section, this discoloration, due to the oxidising of the iron in the rock, extends from $\frac{1}{2}$ inch to 3 inches from the surface, as tested by breaking the rock in many places all round. These blocks of epidiorite in the wall of the fort are more or less subangular, and vary in size from small pieces up to blocks 8 inches by 3 inches by 4 inches. The cementing material is a porous, light to dark grey slag, which is not very evenly distributed through the wall now left. This slag, however, was never liquid, but when most mobile, had only reached a stage of fluidity resembling that of a ropy lava. This is well seen in many instances, where it has only partially filled interstices between the built

stones, and has left *pendent* tongues lining the roofs of the cavities. In the vitrified portion of the remaining wall some of the stones retain their angular shape, with the slag binding them together. Others, and chiefly the smaller ones, are partly fused on their outside and incorporated with the slag. This evidence seems to prove that the heat which produced the vitrification must have been variable, such as would result from wood fuel.

Towards the S.W. corner of the fort the recent excavations disclose a portion of a wall 9 feet long by 3 feet high, built of epidiorite blocks which average 1 foot 6 inches long by 9 inches thick.

This wall lies about 3 feet 6 inches in front of and below the vitrified portion, with a mass of loose rubble between (fig. 12).

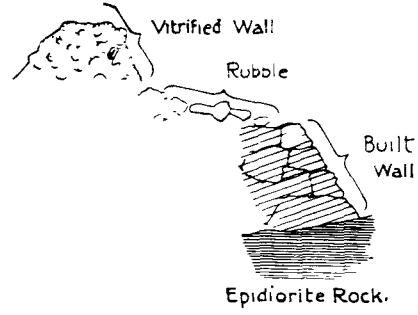


Fig. 12. Diagram of section through the Wall, Duntroon.

This wall is well laid in rough courses (not disturbed by tree roots) and properly banded, a very good example of rough rubble building.

On account of the large size of the stones employed to build this wall and their close-fitting joints, this portion was evidently never intended to be vitrified. It was probably a foundation wall to carry the vitrified wall across the gap which occurs here on the natural rock surface.[1] The lower courses in this wall show no trace of the action of fire, the upper courses only faint indications, while the loose rubble between the top of this wall and the base of the overlying vitrified portion is discoloured by the action of fire.

The present surface of the rock *in situ* all over the centre of this fort shows no signs of having been subjected to the action of heat. The action of fire on the epidiorite on which the wall is built extends to about 3 feet on the outside of the wall. Inside the fort, this dis-

[1] Mr Wilson was not aware that traces o this outer built face were found all round the wall.—D. C.

coloration by heat extends to about 12 feet at least from the base of the interior wall. From these facts we may infer that, in order to produce vitrification, more heat was applied from the inside of the fort wall than from the outside, the ratio being about one to four. Wood was evidently the source of heat, as a large quantity of charred wood has been dug up inside these walls.

Analysis of the Vitrifaction at Duntroon Fort.

By Mr Boston Harley, Chemical Department, Carron Ironworks

None of the specimens submitted to me were absolutely raw; all of them had got more or less of a scorching I took, however, a piece which seemed to have got least heat, and have given that in the table as raw.

No. 1. *Fused Stone.*—This resembled irony slag from a blast furnace, dark bluish-gray in colour. It was not quite honeycombed, but it had a considerable number of cavities, which must have been formed when the stone was in a liquid state, and retaining the imprisoned gases when cooled. The piece weighed about 30 lbs., and measured roughly 10 inches by 6 inches by 6 inches.

Specific Gravity (water unity).	No. 1, 2·712.	No. 2, 2·751.	No. 3. 2·802.
	Per cent.	Per cent.	
Silica	57.28	52·60	53·97
Alumina	14·70	22 57	17·96
Lime	3·12	1·38	3·50
Magnesia	2·08	1·60	2·76
Iron Protoxide	3·76	3·74	5·76
Soda	4·89	3·70	4·32
Potash	·57	1·71	·05
Manganese oxide	1·80	1·53	1·93
Iron peroxide	9·92	8·56	7·36
Phosphoric acid	·55	·53	·56
Sulphuric acid	·30	·22	·19
Combined water and organic matter	·60	1·48	·50
Water at 212° F.	·05	·44	·73
	99·62	100·06	99·59
Iron in protoxide	2 91	2·91	4·48
,, ,, peroxide	6·95	5·99	5 15
Total Iron	9·86	8·90	9·63

No. 2. *Roasted Stone.* — The sample selected for this was only a few lbs. in weight: it was yellow on the outside and dark green in fracture. It was very much softer than either No. 1 or No. 3, which was probably due to moderate calcination and to its more aluminous character.

No. 3. *Raw Stone.*—This was also a small piece, and had a general appearance of trap rock.

The specific gravity of No. 1 in the piece was only 2·303, due to the unsoundness already referred to, but on grinding it up to a fine powder the above gravity was obtained. The sulphur is all shown as sulphuric acid, but doubtless some, at least in 2 and 3, will be in the form of pyrites.

Before the stones were examined I had the impression that the fusion has been brought about by the addition of kelp before ignition, but this had not been the case; there are no more alkalies, alkaline earths, or any kind of fusible materials in the fused than there are in the unfused stones: and further, the quantities of these constituents are quite consistent with composition of basaltic rock.

I believe that there would be little difficulty in fusing stones of this character. Theoretically very little fuel is required; but, making allowance for heating up the wall, loss by radiation, heated gases going off, incomplete combustion, etc., $4\frac{1}{2}$ cwts. of air-dried wood per ton of stones would be ample, or half that quantity of charcoal, assuming that some protection would be afforded to the side of the wall, to form a kind of kiln, which would concentrate the heat and give proper draught for combustion. The analysis of the fused stone also indicates that there was a kind of smothered combustion, as quite a number of minute pellets of iron (included in the protoxide) were found, and part of the oxide had been reduced, either by solid carbon or by carbonic oxide, in either case showing insufficiency of air, which I think would not have been the case with an open fire.

I have been fortunate in getting several small "pendent tongues" in a crevice of the fused piece, and have estimated the principal constituents in them, which are as follows: —

Silica	58·50
Alumina (approx.)	15·70
Lime	4·00
Magnesia	1·90
Soda	3·37
Potash	·70
Iron Oxides, Manganese Oxide, etc.	15·30

I think this is conclusive proof that no foreign material has been introduced to increase the fusibility of the native stone; some of it may have been ground up into a finer state of division in order to fill up the interstices, which would at the same time make them fuse more readily, but I think the proof is entirely against anything else being used.

The mass of fire material in the inside of the fort would play the most important part of the heating by contact at first, but ultimately it would get so dense that the bulk of the liberated gases would find their way to the wall, and there would probably meet with oxygen in quantity coming through the fire outside and produce internal heat. The depth of vitrification would be determined by the regulation and direction of the air-currents.

But in whatever way the fusion has been actually accomplished in the present instance, I have no doubt that it has been done solely and absolutely with heat.

3. FORT ON DRUIM AN DUIN.

The Druim an Duin (Ridge of the Fort) begins at the head or north end of the long narrow arm of Loch Sween called Caol Scotnish. It runs N.N.E. for about half a mile, gradually rising to 300 feet above the sea, when it ends by a short descent, about 50 feet high, upon the top of the pass from Loch Sween to Crinan Loch. The fort is on the summit of the ridge, in a position of strategic importance, commanding the top of the pass and the road, which takes a sharp bend below the fort, and is visible for a considerable distance in both directions.

The crest of the ridge is almost a knife edge, as the rise from the eastern side ends abruptly on the edge of a precipice to the west. Just at the summit, however, there is a little expansion of the crest, which is completely occupied by the fort. The position, therefore, is of great natural strength.

In form the fort is oval, with straight sides and rounded ends, but it is broader at the south than at the north end (Mr Ross's plan, fig. 13). The dimensions are well defined by the wall on the south, east, and west, but it seems doubtful whether there had been a wall to show the limit on the west side, where the precipice formed an ample defence. The plan shows, however, remains at both ends which indicate pretty clearly

that there had been a wall on this side also, although it has almost entirely vanished with the decay of the face of the precipice.

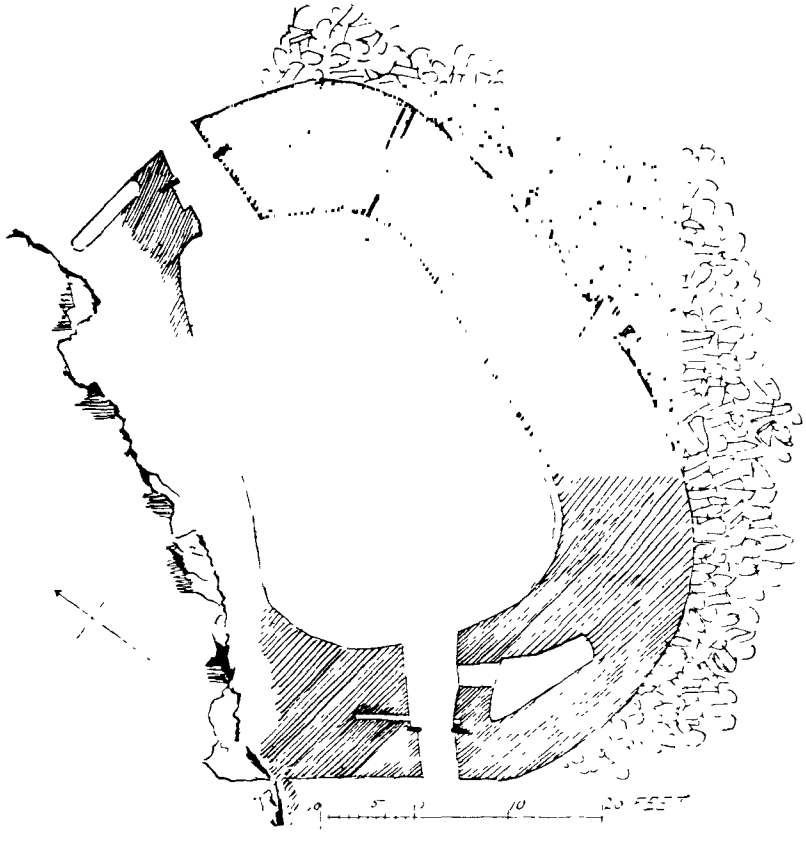


Fig. 13. Plan of the Fort of Druim an Duin,
by Thomas Ross, Architect, F.S.A. Scot.

The present dimensions of the interior, as shown in Mr Ross's plan, are 48 feet in length, by 33 feet in width at the south and 25 feet at the north end.

The Wall.—The shaded part in the plan represents the base of the wall, and a tendency to lessen in width is shown on the east side, where the width was probably still more contracted originally at the top, as the outer face of the wall, now almost entirely fallen down, appears to have had a considerable batter, necessitated by the steepness of the slope on which the outer part of the wall stood.

The wall at the south end is 14 feet thick, and still stands about 6 to 7 feet high, outside and inside. The inner face on the east is about 7 feet high at most, and has a scarcement 5 feet high and 1½ wide; the outer face has entirely fallen down the hill. Advantage was apparently taken of a little flat projection of the rock on this side to build a buttress.

At the north end the width of the wall is 14 feet where it joins the east wall, but gradually diminishes to 9½ near the precipice. Neither in it nor at the south end of the wall was there any scarcement. About 6 feet within the north wall the remains of a secondary wall were found.

Entrances.

The south entrance consists of an outer and inner part: the outer one, (fig. 14) straight, 5 feet long and 4 feet wide, ends at the projecting checks for the door, which reduce the width to 3 feet. Behind the checks was a rectangular bar-hole, 7 inches high and 5 wide.

The inner portion (fig. 15) is 9 feet long, and behind the rebates formed by the door-checks is 5 feet high and 5 feet wide, expanding in the middle to 5 feet 9 inches, as the wall on the east side is slightly curved. On the same side a doorway (fig. 17), still roofed, 2 feet 9 inches wide and 4 feet high, leads by a passage 4 feet long to the guard chamber, 12 feet in length, measured along the straight south wall, and 10 along the slightly bent north wall. It is 7 feet in breadth at the near end, narrowing to 3 at the far end. One or two roofing slabs remain *in situ* at the far end, giving a height of 4 feet 8 inches for the chamber.

The west side of the inner part of the entrance is straight. An apparent entrance in it to a guard chamber proved to be a mere break in the wall.



Fig. 14. South Entrance to Fort on Druim an Duin, from the outside.



Fig. 15. South Entrance to Fort on Druim an Duin, from the inside.

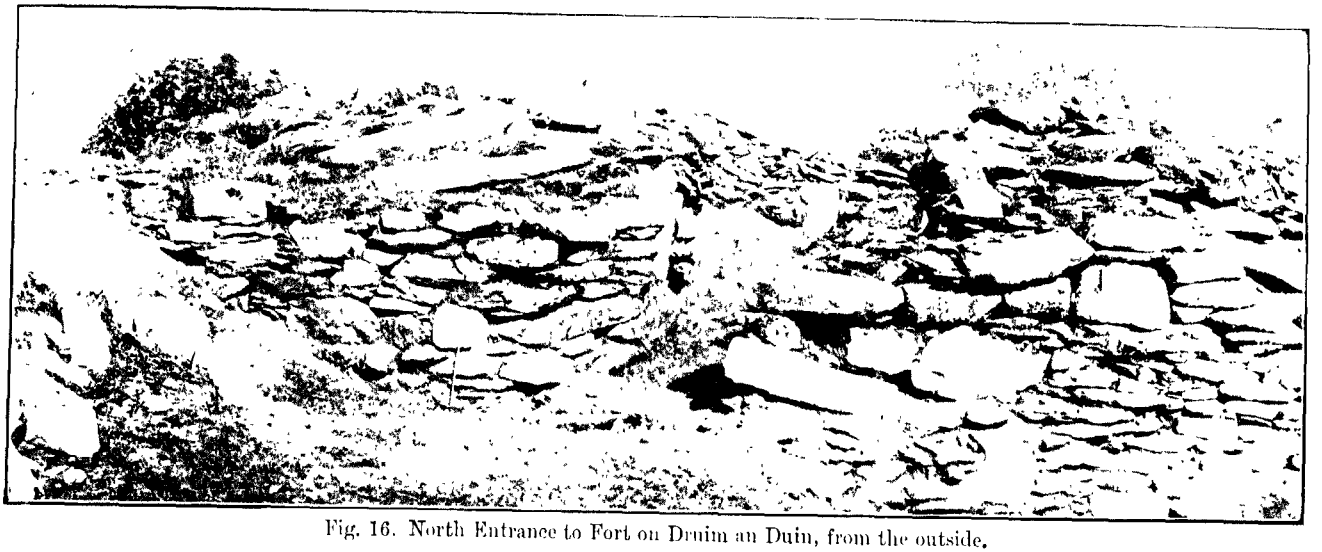


Fig. 16. North Entrance to Fort on Druim an Duin, from the outside.



Fig. 17. Doorway of passage to Guard-room of Fort on Druim an Duin.

As shown in the *Proceedings*, xxxviii. 240, fig. 30, one roofing slab remained in position at the inner part of the entrance, proving that the height could not have exceeded 5 feet. Several other roofing slabs lay in the entrance, but no stone door remained

The north entrance (fig. 16) is not in line with the other, being nearer the cliff. It is $12\frac{1}{2}$ feet in length on the east side, and only 10 on the west, a difference due to the rapid narrowing of the wall towards the precipice. It is 6 feet wide at the inner end, narrowing to $3\frac{1}{2}$ at the outer end, and is slightly recessed on the west side, behind the rebate for the door. It has no guard chamber. A large stone slab, suitable for the door, lies a little to one side, outside the entrance.

Description of the Relics. By Dr Joseph Anderson.

Portion of a Cup of steatitic stone, showing $2\frac{1}{2}$ inches of the curve of the rim, which is flat and smooth and $\frac{1}{2}$ inch in thickness, and $2\frac{1}{4}$ inches of the depth of the side of the cup, which is carefully smoothed inside, the outside being left rough, and showing the marks of the tool. A handle, $1\frac{1}{8}$ inches in thickness and $1\frac{7}{8}$ in greatest breadth, projects for $1\frac{1}{2}$ inches from the upper part of the cup, $\frac{5}{8}$ inch below the rim. The handle is perfectly flat above and below; the sides are straight for about an inch, and then rounded towards each other. It is pierced perpendicularly by a circular perforation $\frac{5}{8}$ inch in diameter. Such stone cups with handles have been found in the brochs. The fractured edge in this case shows that the break is old, and three small holes on the upper side apparently indicate an attempt to mend the vessel by clamping the broken parts together.

Three oblong water-rolled Pebbles of quartzite, one of which, $2\frac{3}{4}$ inches diameter and almost circular, has one face rough, and on the other an oblong groove or depression, produced as if by point-sharpening; the other two, slightly longer, have oblique depressions on both faces. They are quite similar in form and character to fig. 28 found in Dunadd. Such pebbles of

quartzite, with oblique depressions on one or both faces, have also been found in the brochs.

Four thin flat Discs of slaty stone, varying from $3\frac{1}{2}$ to $1\frac{3}{4}$ inches in diameter.

Disc of sandstone, $3\frac{3}{4}$ inches in diameter, with rough surface, having a perforation in the centre.

Half of the upper stone of a small Quern of greenish micaceous schist, which has been about 15 inches in diameter.

Another Quern-stone, unperforated, is shown against the wall in fig. 14.

4. DUNADD.

The excavation of Dunadd was of unusual importance, because of its reputation as the capital of Dalriada, the primitive kingdom of the Scots, and because it is one of the very few hill forts mentioned in the earliest annals of our country. William F. Skene and other authors have attributed a still higher antiquity to the site by connecting it with the *Tale of the Children of Usnach*, in which they are called "the three Dragons of *Dunmonadh*," a name for Dunadd believed to be derived from the *Monadhmor*, or Great Moss, on which the fortress stands so conspicuously. This would carry back our traditional knowledge of the place probably to the beginning of the Christian era.

But, however little reliance we may place on this identification, or the further one by the same authorities with the *Dunmonaidh* of "*the Tale of the Battle of Magh Rath*," which records events of A.D. 637, there is no reason to doubt that it was the Dunadd or Duinatt besieged, A.D. 683, by Fearchar Fadha, chief of Cinnel Baeden, allied with Bredei, king of the Picts, in an attempt to deliver Dalriada from the thraldom of the Britons and Angles.[1] The attempt failed, but two years later the independence both of Scots and Picts was secured by the destruction of King Egbert and his army at Dunnichen by Bredei (*Celtic Scotland*, W. F. Skene, vol. i. *passim*). The only other historical event relating

[1] A D. 683. Obsessio Duinatt et Duindurn.—*An. Ult.*

to Dunadd was its siege and capture [1] by Angus MacFergus, king of the Picts, A.D. 736 ; but probably it would lose much of its importance after 843, when Forteviot became the capital of the united Picts and Scots.

Position.—The site of Dunadd was well chosen for the capital or chief fortress of a kingdom so long drawn out as almost to exemplify the brief definition of a line—length without breadth. It was placed at the junction of the two provinces into which Dalriada was divided—Lorn and Kintyre ; it stood in the way of invasion by the only easy access to the kingdom from the east, and its natural strength was very great.

The Monadhmor upon which the fortress stands is a dead flat, raised but a few feet above the sea-level, and upwards of 2 miles square, through which the river Add meanders to discharge itself into the Crinan Loch. Near where the river enters the moor, on its N.E. border, and on the S.W. side of the stream, the isolated rocky eminence of Dunadd rears itself to a height of 160 feet above the moor and 176 above the sea (fig. 18, view from the north-west).

In a direct line, the position is 2 miles from the sea, but the influence of the tide extends to it up the river, which, approaching from due east, bends immediately below it at a right angle due north (fig. 18, view from the north-east), and it seems not unlikely that small galleys may have been able to reach below the fortress in primitive times.

The rocky mass is a parallelogram of 1000 by 650 feet, trending in a N.N.E. direction (plan from the 25-inch O.M., *Proceedings*, xxxviii. 227, fig. 17). From the northern, eastern, and particularly the southern sides the rise is not at first generally steep, though it is everywhere broken by little cliffs and projecting rocks, and all the slopes from these three directions terminate at a height of about 140 feet above

[1] A.D. 736. Ængus MacFergusa rex Pictorum vastavit regiones Dailriatæ et obtinuit Dunad et combussit Creic et duos filios Selbaiche catenis alligavit id est Dongal (*King of Dalriada*) et Feradach.—*Tigheruac.*



Fig. 18. Dunadd from the north-west.

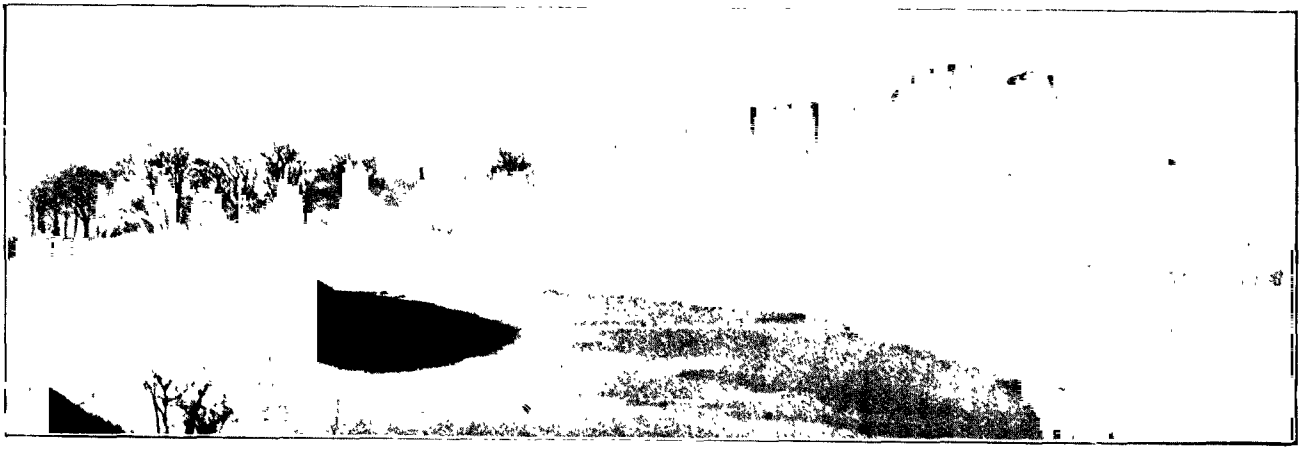


Fig. 19. Dunadd from the north-east.

the plain, on the rim of a hollow plateau, which has a considerable fall to the N.E. The background to this plateau on the west is a very steep rocky ridge, 30 to 40 feet high, which forms the hog-backed summit of the hill. Immediately to the north of the ridge a precipitous, conical, almost inaccessible mass forms a second top, 25 feet lower than the summit of the ridge. In fig. 19 the plateau is seen on the skyline: above it is the conical head, and beyond that the ridge, in profile. From this ridge the descent to the plain on the west is so precipitous that the fortress was practically unassailable on that side (fig. 18).

The fortress was thus naturally divided into a lower part on the plateau and an upper one on the ridge, the latter completely dominating the former.

The conical top does not appear to have been fortified, although it closely commands a great part of the upper fort, and looks down on the north end of the lower one, but the difficulty of the ascent from the moor is so great that a few men on the top could easily repulse any attack, without artificial protection.

Dunadd may be not inaptly compared to Dumbarton Rock. They both rise abruptly—in the one case from the level surface of the sea, in the other from a flat moor—to a double-headed top, one of which is conical.

The Fortifications.

I. The Upper Fortress.

The summit of the ridge is 250 feet long (Mr Ross's plan, fig. 20). Beginning in a sharp point at the S.W. end, it gradually widens by a gentle ascent, 80 feet long, to a breadth of 60 feet at the actual top. The width then gradually contracts to 25 feet at the north-east end by a gentle slope, broken by two steep but short rocky descents. At this end the level is 50 feet below the top of the ridge and 25 below the conical top, which is only about 30 feet off, and rises from the ridge-end by a straight mural cliff 10 or 12 feet high. The configuration of the ridge led to its being fortified by three works, in line with each other.



Fig. 20. Plan of the Fort of Dunadd, by Thomas Ross, Architect, F.S.A. Scot.

A. *The Upper Ridge-fort.*

The wall of this fort, adapting itself to the edges of the ridge, encloses a space 100 feet long and 45 wide, of a sharp-pointed obovate form, and including the nearly level summit of the ridge. For the most part buried under the earth, this wall was traceable all round, on excavation, still

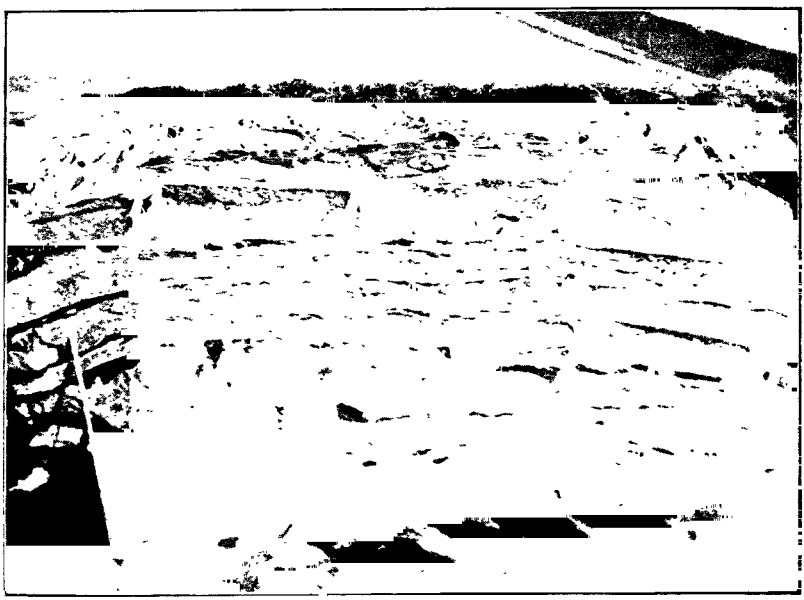


Fig. 21. Inner face of Wall at entrance of Upper Fort, Dunadd.

standing 3 or 4 feet high in some places. The width was 12 feet. It was well built, as is well seen in a view of the inner face at a part close to the entrance, fig. 21. The entrance, 10 feet in width, was at the north-east corner, and was approached from the fort on the plateau by a steep narrow passage, which had apparently been cut into steps.

The interior was covered with several feet of friable earth, partly blackened, and mixed with small stones, and it contained many relics, but no remains of stone buildings.

B. *The Middle Ridge-fort.*

A short rocky slope, 15 feet in height, falls directly on the middle fort, which is irregularly oval, and encloses an area of 75 by 35 feet. *The wall*, of which scarcely a sign showed on the surface, had mostly fallen down the slopes, and, on excavation, could be traced only on its inner face, except at the north-east corner, where a part of the outer face remained, as the foundation here was on a flat rock, which extended beyond the wall. On the outer rock-platform thus formed, 12 feet in length and 6 in breadth, a buttress seemed to have been constructed.

Little remained of the wall further south on the eastern side, where the defence was greatly helped by little cliffs, but one distinct part, several feet high, still barred what appeared to be the natural approach from the lower fortress. The precise position of the entrance could not be ascertained, though probably it was near the S.E. corner.

The Interior.—The accumulated soil was as much as 4 or 5 feet deep in some parts, and was a heavy black mould, unmixed with stones. Relics abounded, but the only building was the fragment of a wall springing from the south-west corner of the main wall, not bonded into it, and running a short distance obliquely into the area. It was of inferior masonry, and in all probability of secondary origin.

Outside the south-east corner of the fort the figure of a boar, incised on the rock, was uncovered. The back, from exposure to the weather, was worn away, but the rest was well preserved, and the lines could not have been drawn with greater spirit and truth (fig. 22). Its length is 21 inches, and it is placed between the previously known footmark and cup; and if the king, at his inauguration, stood in the footmark, he would face north, with the figure of the boar behind, represented as if advancing towards him.



Fig. 22. Figure of a Boar incised on the rock in the Fort of Dunadd.

C. *The Lower Ridge-fort.*

Another short rocky slope leads to the lower fort, which had not an independent wall to the south like the middle fort, but was tacked on to it. The only distinct trace of the side walls was at the S.W. corner. They seem to have been straight and parallel, and abutted on the straight mural cliff of the conical top. The interior is only about 25 feet square, and is completely commanded from the conical top, the very summit of which is not 30 feet off, and is 25 feet above the fort. But as the separating cliff is only 10 or 12 feet high, short ladders would give an easy access to the top when it was necessary to defend it, which a few men could do, as it is almost inaccessible from the moor. The only accesses were from the moor on the west, by a steep narrow cleft separating the two summits of the hill, and from the plateau fort on the east, by a continuation of the same cleft. Both these very narrow passages were barred by cross-walls.

II. The Plateau Fort.

The hollow plateau on which the lower fort is situated is rudely semicircular (plan, fig. 20): the base, 205 feet long, is formed by the foot of the ascent to the ridge: the semicircle, with a radius at the widest part of 135 feet, is marked by the well-defined rim of the plateau. From the nature of the ground, however, the curve is indented on the S.E. by a re-entering right angle. At the southern end the area is fairly level, but there is a pretty rapid fall thence to the northern end.

The Wall at the north end abuts on the precipitous face of the conical summit, and circling round the rim, after climbing over a flat rock, reaches the entrance on the east, beyond which it makes the angled intake, and then resumes its curved course, to end against the precipitous face of the ridge-summit.

Completely buried under its own ruins, it was found on excavation to stand 3 or 4 feet high outside (fig. 23) and 2 or 3 inside in places, and to be 12 feet wide. The faces were well built of fair-sized stones, pinned

with small ones, and with rubblework between. Fig. 24 shows the inner face, at a point where the natural rock was used to eke out the defence.

The Entrance was approached from the east up a rather steep natural gap in the hill, 60 feet long, 10 wide, and 8 or 10 in depth, with sides mostly mural, but not continuously so (fig. 25, and *Proceedings*, xxxviii., fig. 24). This gap is traceable some distance into the area (fig. 26), and appears again on the ascent to the ridge, and once more on the descent from it on the western side.

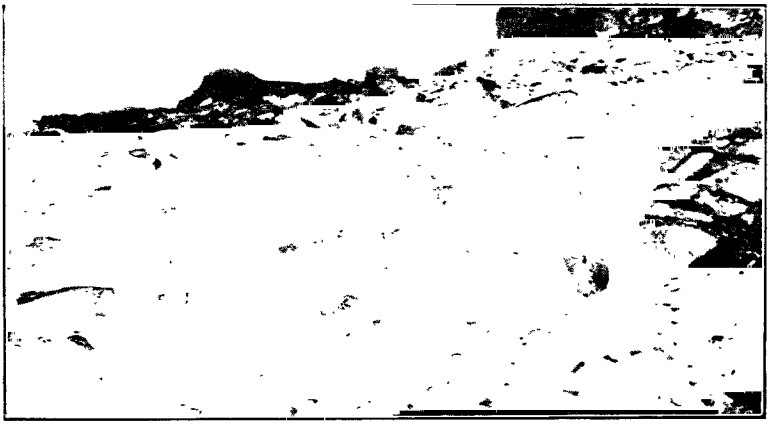


Fig. 23. Outer face of Wall, Lower Fort, Dunadd.

Captain Thomas (*Proceedings*, xiii. p. 24) suggests that the entrance had been bridged across, and that the wall was continued over it, which probably was the case.

The nature of the ground favoured a subdivision of the plateau fort into three parts, each more or less capable of separate defence.

Subdivision D.

The higher and comparatively level nature of the ground at the southern end of the plateau led to a wall being drawn across (plan, fig. 20) so as to cut off this space from the rest of the area, which

descends rather rapidly to the northern end. This wall is practically continuous with that of the ridge-fort B, a precipitous rock alone separating them. Descending to the plateau, it curves round to the main wall at the re-entering angle, and thus forms a quasi-semicircular enclosure, with a base at the ridge-foot of 125 feet, and a longest radius of 75 feet.

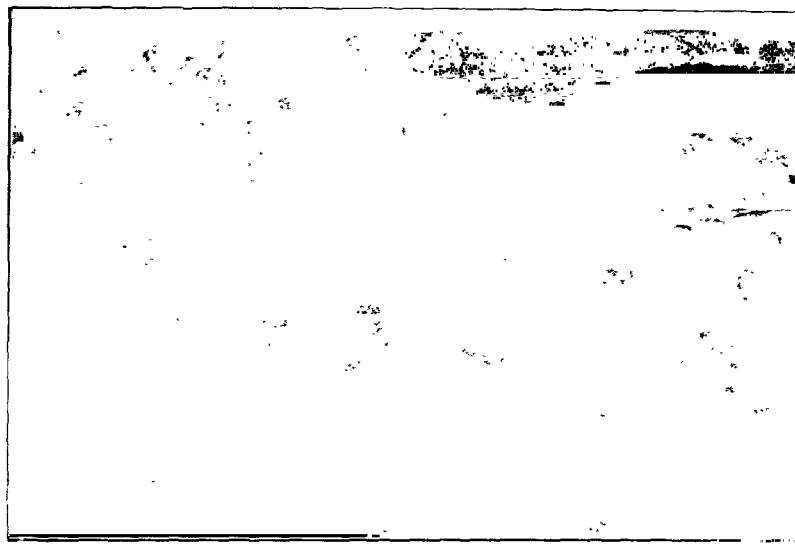


Fig. 24. Inner face of wall, partly of rock, Lower Fort, Dunadd

At the point of junction with the main wall there is a deficiency, probably indicative of a passage from D to the lower subdivision F, and a stone slab, 4 feet by 3 feet 6 inches, lying near, may have been its door. There was also a narrow exit (marked "postern" on the plan) to the outside of the fortress in the south wall. The sides are gone, but a slab 5 feet by 4, lying in the gap, had apparently been the door, as 18 inches behind the inner line of the wall another slab, set on edge, affords just the space required for the "door" to slide between it and the wall



Fig. 25. Entrance to Lower Fort, Dunadd, from the outside ; the ascent to the Upper Fort seen through the gap in the background.

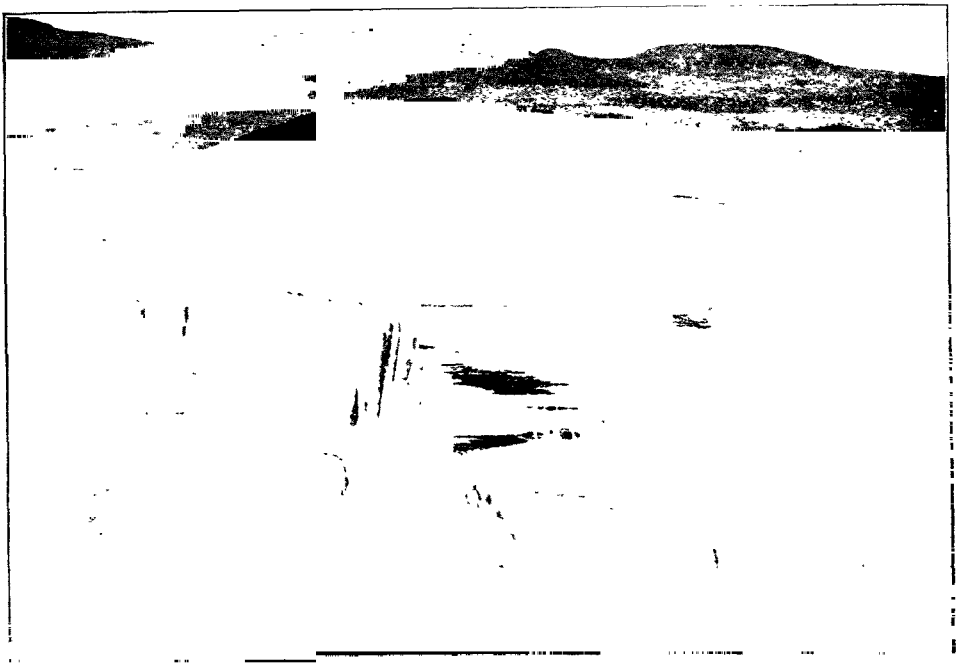


Fig. 26. Entrance to the Lower Fort, Dunadd, looking out.

This subdivision covers the approaches to the forts A and B on the ridge, and dominates subdivisions E and F on the plateau.

In *the interior* the soil closely resembled that of the middle upper fort in its depth, blackness, and the abundance of the relics it contained. The only structure found was a winding passage or chamber, opening from the area about 14 feet from the south entrance, and retiring towards the hillside. It is 24 feet long and 4 feet wide, expanding suddenly to 6 feet at the end, where it is closed by a rock. The sides are partly of rock, partly of well-built converging walls, still 3 feet high. The structure seemed to be original, from the style of the masonry, and as several relics were found in it. A short curved wall 18 inches high, with three courses of masonry remaining, proceeds from the north side of this structure to the foot of the rocks, on the south side of the approach to the upper fort A, and there were unmistakable remains of another short wall running directly from it to the foot of the rocks under the same fort.

Subdivision E.

Another quasi semicircular space, with a base of about 50 feet and greatest radius of 55 feet, at the north corner of the plateau, was found to be cut off by a curved wall originally 80 feet long, the central 60 feet of which survive, and of which there was no sign on the surface. It was carefully built of large flat slabs, with a scarcement to the outside: and although the present width is only 4 feet, it must have been considerably wider originally, in order to bring it to the top of the slope on which it is founded. Its present height is from 9 inches to 3 feet 6 inches.

In *the interior* the rock was either on the surface or so near it that very few relics were found. The only structure within was the "well," 30 feet from the north end of the main wall, and close to a gap, said to have been made by a farmer to give access to the well, which, however, has long been covered with two heavy slabs. According to repute, it was of such depth that the water in it rose and fell with the tidal influence on the river below, but it proved to be rather a cistern than a well,

being a mere cavity in the rock 6 feet deep, and containing little water and no relics.

It was circular, 4 feet in diameter, well built, and surrounded by a pavement of thin flat stones set on edge and radiating outwards (*Proc.*, xxviii., fig. 25, p. 234).

Subdivision F.

Wedged in between D and E this division is of an irregularly curved form. It is only 20 feet wide where it lies against the hillfoot, while the circumference of the outer curve at the rim of the plateau is as much as 180 feet, with 60 more for the straight south-west end. The inner curve is 100 feet long. Measured straight, the area is about 130 by 120 feet.

The same conditions of rockiness and paucity of relics prevail here as in E. Remains of two secondary structures were found. One is 25 feet in from the entrance, and appears to be the S.W. end of a rectangular building or enclosure which had run parallel with the fort wall. The remaining side walls are 30 and 15 feet long, and the end wall is 13 feet long. One angle is rounded. The walls stand upon 18 inches of black earth and are of inferior masonry, proofs of their secondary character. Fifteen feet west of this, two walls, 20 and 15 feet in length, meet at a right angle; they also are poorly built and stand on black earth.

General Remarks on the Results of the Excavation.

The abundance of relics and particularly of querns found within the fortress indicates very clearly that it was no mere temporary refuge, but was permanently occupied. Regarded as a capital, the population, if it was entirely confined within the walls, must have been small, according to our modern ideas, as the enclosed space was only, roughly speaking, 220 feet square, from which a deduction must be made of the uninhabitable rocky hillface falling from the higher on the lower fort. Although it is interesting to have found that the Scots of the day, at least in their capital, did not live in stone houses, this deficiency deprives us of the

best means of estimating the population; but if we take the number of men required to man the whole wall of enceinte, allowing 3 feet of space for each defender, the strength of the garrison would be about 250 men. As, however, the upper fortress was impregnable till the lower one had fallen, a few men would suffice to guard it until the men below were driven back to reinforce them, so that a strength of 150 might have sufficed for the garrison, and the place could not well have held more if the wives and families had also to be accommodated. In that case the population might have amounted to about seven hundred souls. Whether it was augmented by a settlement outside the walls is a question which, in the absence of stone buildings, could hardly be settled by excavation.

The only clues we have to the nature of the dwellings are the abundance of deep black soil and the number of iron articles found in the interior, the one suggestive of the use of sods, the other of wood in the construction of the habitations.

As to the weapons used by the garrison, some half-dozen iron spear- or lance-heads speak for themselves, but no arrow-heads were found, to prove a knowledge of archery, and there was only one fragment of a sword.

The suggestion of Captain Thomas that the kings of Dalriada were inaugurated standing with one foot in the footmark cut near the top of the rock receives some confirmation from the discovery of the carved boar, between it and the cup-like cavity. The great courage of the wild-boar no doubt was the cause of the adoption of that animal as the device of the Twentieth Roman Legion, and the same reason may have commended it to the early kings of Scots. Only two other incised representations of boars have been found in Scotland, both in Inverness-shire,—one, complete, at Knocknagael (*Early Christian Monuments of Scotland*: Descriptive list, fig. 108); the other, incomplete, at Dores (*op. cit.*, fig. 100). The latter, Mr Romilly Allen hesitated to identify as a boar, but the remaining part resembles the corresponding part of the Dunadd boar far more than in the Knocknagael example, so that the claim of the Dores one to be a boar seems now to be established.

Not the least in point of interest among the finds were the cross carved on a quern and the *In* [*n*]*omine* incised on a disc of slate, being the first proofs of Christian influence discovered in the native forts.

Altogether it appears to me that the Society may be congratulated on the results of the investigations at Poltalloch. They do something to elucidate a very obscure period in early Scottish history, they form a basis and encouragement to the further pursuit of comparatively new lines of inquiry; and they have added a large number of interesting relics to the Collection in the National Museum. Finally, it should not be forgotten that these results are due to the liberality of the Hon. John Abercromby in putting the Society in possession of the necessary funds, without which the excavations could not have been undertaken.

Description of the Relics from Dunadd, by Dr Joseph Anderson.

Implements of Stone.—Twenty-two Whetstones of sandstone, clayslate, and quartzite, varying from 10½ inches in length and 2½ inches in breadth to less than half that size, some being squarish in section and used on all four sides, others thinner and used only on their broader faces, while three of the smaller ones are perforated at one end.



Fig. 27. Whetstone of quartzite. (⅓.)

Slender and finely-shaped Whetstone (fig 27) of brownish-red quartzite, tapering equally to both ends, 3½ inches in length.

Thirty other stones of irregular shape, which have been used more or less as Whetstones or Polishers.

Six Polishing Stones, mostly of quartzite and naturally shaped, but bearing marks of use on one or both sides or edges, varying from

6 inches to $2\frac{1}{2}$ inches in length, and from 4 inches to 2 inches in breadth.

Seven quartzite Pebbles of oval shape and naturally rounded, but bearing an oblique groove on one or both faces, and in some cases also with marks of use on one or both edges. They vary in size, but are on the average little more than 3 by 2 inches, and scarcely more than an inch in thickness. One of them is shown in fig. 28.

Three Hammer-stones or Pounders, with ends or sides abraded by use, one having a picked hole near the centre.

Nine Discs of slaty stone, from about $3\frac{1}{2}$ to 2 inches in diameter, mostly rough, but one with smooth edge, another smooth and with a

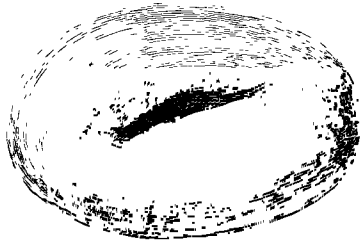


Fig. 28. Pebble of quartzite with oblique groove. ($\frac{2}{3}$)

notch on each of its opposite edges, and three with central perforations, roughly made.

Two nearly circular discs of reddish-brown quartzite with rounded edges, about an inch in diameter, somewhat similar to the quartzite discs from Waulkmill, described on p. 215 *antea*.

A circular rotatory Grindstone, of sandstone, $10\frac{3}{4}$ inches in diameter, with central hole for an axle 2 inches square. The stone has been used on one side as a mould for a bar 7 inches long and $1\frac{1}{4}$ inches broad. Half of another Grindstone and part of a third are of smaller size.

About fifty Quern-stones (upper or under) were found, of which the best examples are shown in fig. 29. One of these, of micaceous sandstone, $15\frac{3}{4}$ inches in diameter, with a moulding round the central hole, and a handle-slot on one side, is remarkable in having a small cross-

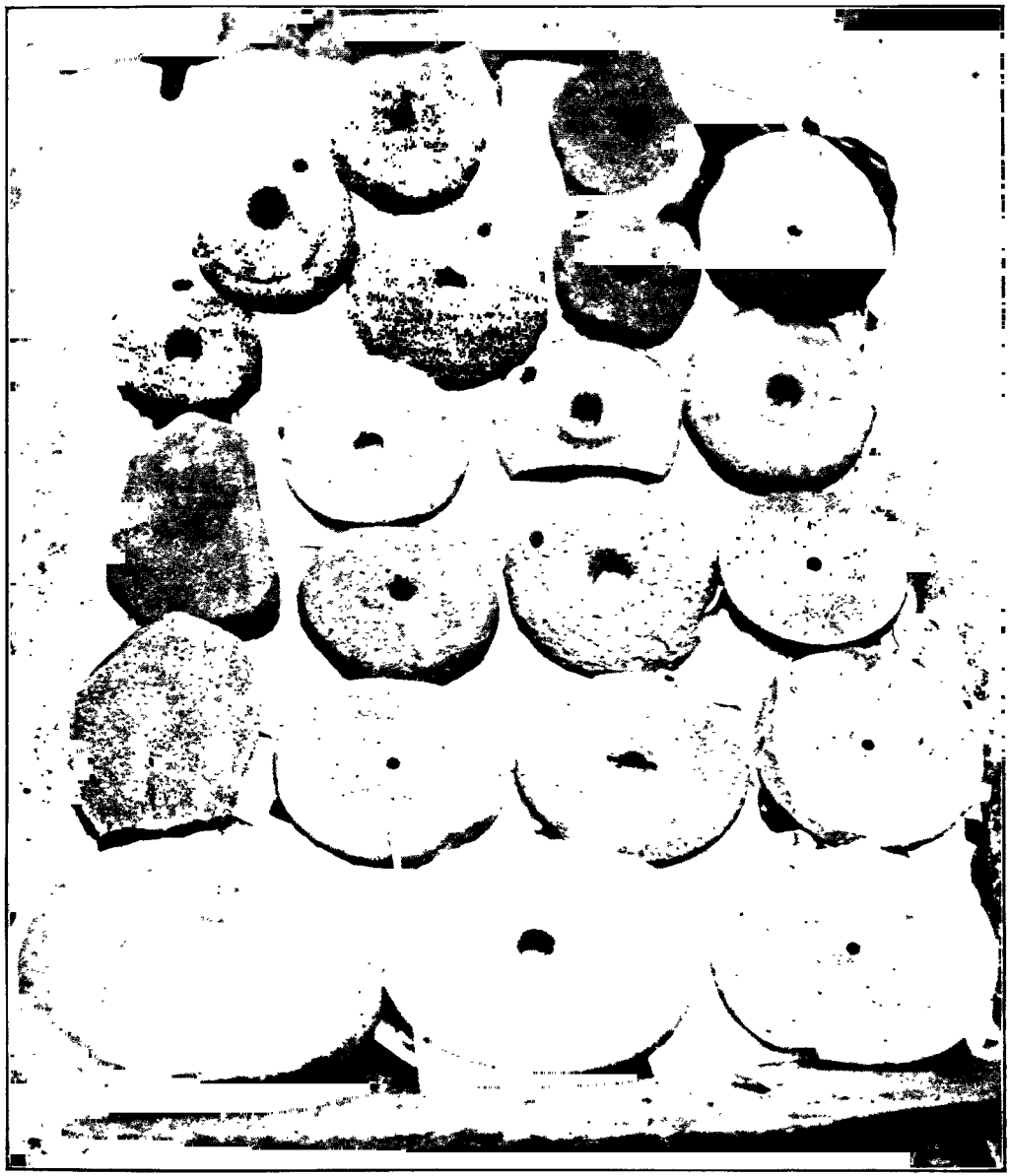


Fig. 29. Eighteen of the Quern Stones and the three Grain-rubbers found in Dunadd.

potent incised near the circumference. It has been reserved for the Museum, along with an incomplete upper Stone, 15¾ inches in diameter, with raised moulding round the central hole and a vertical handle-socket.

Three Stones of Saddle-querns or Grain-rubbers, one being a lower stone and two upper stones.

Two Whorls, one of steatite, 1⅞ inches in diameter, and one of micaceous stone, 1⅜ inches in diameter.

Small lump of hæmatite.

Three Socket Stones, viz., (1) of reddish sandstone, 6¼ by 2¼ inches, having on one face a cup-shaped depression and half of a deep socket-hole, the other part broken away, and on the other face two moulding cavities for bars 3¼ and 2¾ inches in length, and what seems to be a small ring-mould: (2) small angular broken fragment of sandstone, 4¼ inches by 2 inches, showing half of a socket-hole and several grooves made by sharpening: (3) block of stone, 10 inches by 6½ inches, with a socket-hole in the centre: (4) another, 9 inches by 7 inches, with a deep socket-hole.

Three Stones with cup-shaped cavities, one of whinstone, about 9 inches square, with a cup 3½ inches in diameter: another of soft white sandstone, and about the same size, having a large cup-shaped cavity on each face: the third of indurated sandstone, 7¾ by 3 inches, with a deep cup ⅝ inch in diameter, surrounded by a ring 2 inches in diameter, and showing marks on the opposite face of sharpening tools.

Portion of the side and bottom of a steatite cup, exceeding 4 inches in diameter, and having a raised moulding underneath the rim.

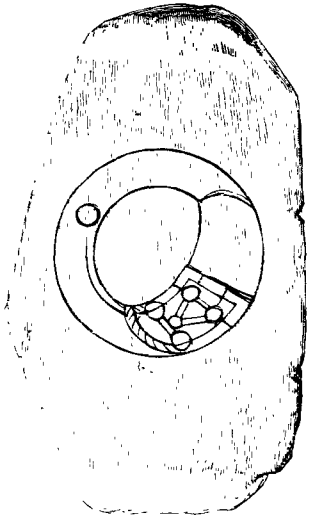
Oblong naturally-shaped piece of greenish slate (fig. 30), 3 inches in length by ⅞ inch in breadth, with one of its surfaces scratched over with irregular scrolls, and a figuring resembling a cross-shaft bearing a square-shaped head. It was found in the fort D.

Oblong piece of smooth fine-grained slaty stone (fig. 31), having the outline of a penannular brooch, with five bosses carefully traced upon it. One half of the brooch has the detail drawn in, the other half is merely outlined. This stone was also found in the fort D.

Small circular Disc of greenish slate (fig. 32), $1\frac{5}{8}$ inches in diameter, having the words I[N] NOMINE incised across the centre in letters somewhat resembling Irish minuscules. It was found in the fort D, close by the roadway leading to the fort A.

Carved Ball of greenstone (fig. 33), $2\frac{3}{4}$ inches in diameter, with six projecting discs. It was found on the rock close to the inside of the





Figs. 30 and 31. Stone with scratched ornament ($\frac{1}{4}$); and Stone with engraved outline of penannular brooch ($\frac{3}{4}$)

wall of the fort A, on its south-east side, and about 12 inches underneath the surface.

Moulds of Stone.—Undressed slab of dioritic stone, 14 inches in length by 5 inches in breadth, with a moulding cavity for a bar 12 inches long; slab of greenstone, $11\frac{1}{2}$ inches in length by $6\frac{1}{2}$ inches in width, with a moulding cavity for a bar 10 inches in length; slab of stone, 9 inches in length by $5\frac{3}{4}$ inches in width, with a moulding cavity for a bar 6 inches

in length: thinnish slab, 8 inches in length by 5 inches in breadth, with a moulding cavity (imperfect) for a bar $5\frac{1}{2}$ inches in length: slab of





Figs. 32 and 33. Stone Disc with inscription ($\frac{1}{2}$); and Stone Ball with projecting discs ($\frac{1}{2}$).

sandstone, $5\frac{1}{4}$ by $4\frac{3}{4}$ inches (fig. 34), with a circular cavity $\frac{3}{8}$ inch in diameter and slightly over $\frac{1}{4}$ inch in depth, and a cavity with its sides

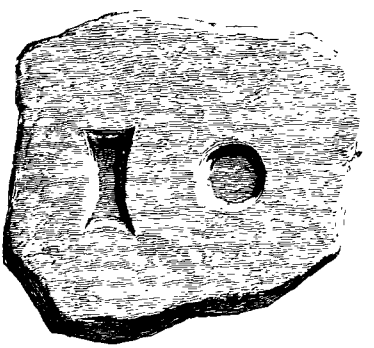


Fig. 34. Stone Mould with two cavities ($\frac{1}{2}$).

curved slightly inwards, $1\frac{3}{8}$ inches in length by $\frac{3}{4}$ inch in width at the ends and $\frac{5}{8}$ inch in the middle, the depth not exceeding $\frac{3}{8}$ inch in the centre, and shallowing slightly to the sides and ends: rough flat slab of greenstone, $5\frac{1}{4}$ by 5 inches, with a bar-mould $3\frac{1}{4}$ inches in length, and

a moulding cavity 3 inches in length, of oval shape, with handle at one end, like that on the reverse of fig. 8 (p. 268), from Ardifuar.

Mould of Clay.—Mould of clay (fig. 35) for a small penannular brooch, $\frac{3}{4}$ inch in diameter.

Crucibles of Clay.—Crucible, cup-shaped (fig. 39), with rounded bottom, 3 inches high, and $3\frac{1}{2}$ inches in width at the mouth, which has a slight lead in the lip at one side for pouring; traces of bronze adhere to the inside.

Three fragments of smaller Crucibles of a rounded cup-shape.

Crucible of clay, of deep cylindrical form (fig. 38), rounded off below, somewhat like the bowl of a tobacco-pipe, $2\frac{3}{8}$ inches in height and $1\frac{3}{8}$ inches in diameter at the mouth, having a short, flat handle projecting obliquely upwards from the middle of its height.

Crucible of clay, of broader form and thinner fabric (fig. 36), $1\frac{7}{8}$ inches in height, slightly imperfect at the mouth, and bulging outwards below to an extreme width of $1\frac{5}{8}$ inches, with a short, broad, flat handle, projecting almost horizontally from about the middle of its height. Traces of bronze are visible, adherent to the interior of the vessel.

Crucible of clay, small and cylindrical-shaped (fig. 37), and narrowing below like the bowl of a tobacco-pipe, $1\frac{1}{2}$ inches in height, and $\frac{3}{4}$ inch diameter at the mouth, with a short, flat handle projecting obliquely upwards from about the middle of its height.

Crucible of clay (fig. 40), small and almost saucer-shaped, with flat bottom, the sides only $\frac{3}{4}$ inch in height, the mouth slightly oval, and $1\frac{5}{8}$ inches in greatest diameter.

These crucibles were all found in the fort D.

Pottery.—Portion of the lip of a large jug-like vessel of coarse reddish wheel-made ware (fig. 41), showing a wide shallow spout.

Several fragments of rims and handles of vessels of similar ware.

A portion of a basin-shaped vessel of coarse grey ware, blackened by fire.

Two pieces of wheel-made, salt-glazed ware, and a number of fragments of rude, unglazed pottery not made on the wheel.

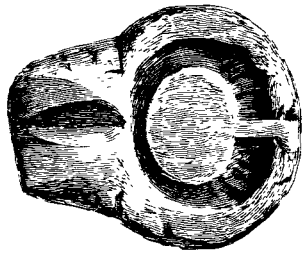


Fig. 35

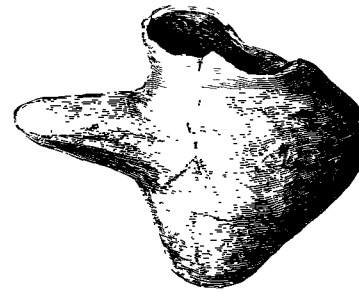


Fig. 36.

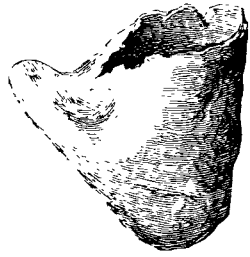


Fig. 37.



Fig. 38.

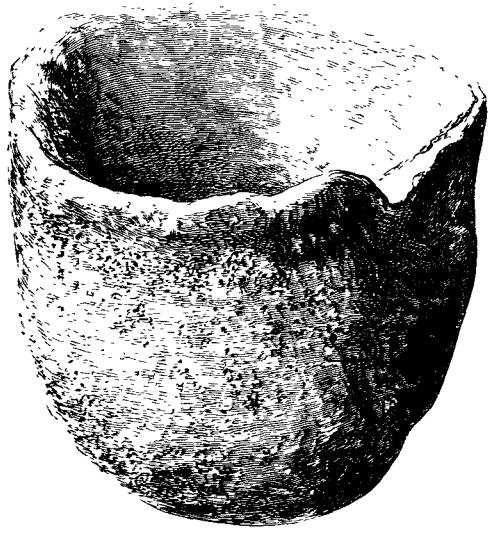


Fig. 39.

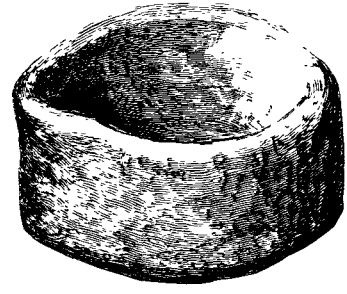


Fig. 40.

Figs. 35–40. Mould of clay, three Crucibles with handles, and two without handles, from Dunadd. (Figs. 35 and 40 are actual size, the others $\frac{3}{4}$).

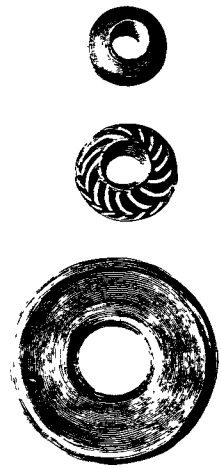
Glass or Vitreous Paste.—Flat ring of clear green glass (fig. 42), 1 inch in diameter. It was found in the fort D.

Bead of dark blue vitreous paste with whitish stripes (fig. 43), $\frac{1}{2}$ inch in diameter.

Bead of dark blue vitreous paste (fig. 44), plain, $\frac{3}{8}$ inch in diameter.



Fig. 41. Fragment of large Jug of red ware. ($\frac{2}{3}$.)



Figs. 42–44. Beads of glass. ($\frac{1}{1}$.)

Jet, or Cannel Coal.—Disc, $3\frac{1}{8}$ inches in diameter, cut out in the process of making an arm-ring.

Five portions of finished arm-rings, and a portion of one in the rough, flat and unpolished.

Bone Implements.—Punch of bone, $3\frac{1}{2}$ inches in length, the point showing signs of use.

Pin or bodkin of bone (fig. 46), $6\frac{1}{2}$ inches in length, well rounded, and the point end polished by use.

Pin of bone, with flattish head (fig. 45), $5\frac{1}{4}$ inches in length, apparently made from the wing-bone of a large bird.

Bone handle for a tool, with a hole for the tang, $3\frac{1}{2}$ inches in length, cylindrical and roughly made

Portions of antlers of red deer, cut and sawn across.



Figs. 45 and 46. Pins of bone. ($\frac{1}{2}$.)

Comb of bone (fig. 48), $2\frac{1}{2}$ inches by 2 inches, double-edged, and nicely ornamented. It is made, in the usual way, of small sections toothed at each end, the binding slips on either side secured by iron rivets. It was found on the subsoil in the fort B.

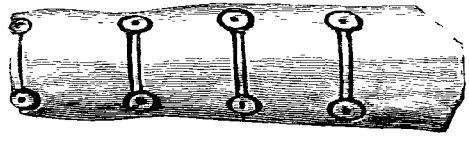


Fig. 47. Bone with incised ornament. ($\frac{1}{1}$.)

Narrow section of a cylindrical piece of bone (fig. 47), $2\frac{1}{4}$ inches in length, with an ornamental pattern of two circles, with central dots, connected by two parallel lines. It was found under the surface layer, on the subsoil, in the fort B.

Bronze Pins.—Pin $3\frac{1}{2}$ inches in length (fig. 50), with projecting head of squarish form, the front slightly sunk, and showing incised markings, surmounted by three bars, with ends projecting forwards. It was found under the debris of an interior building in the fort F.

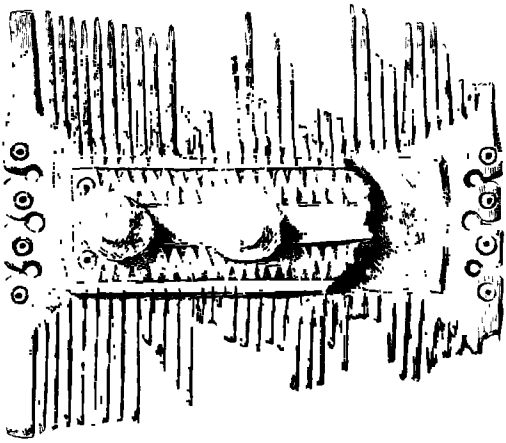


Fig. 48.



Fig. 49.

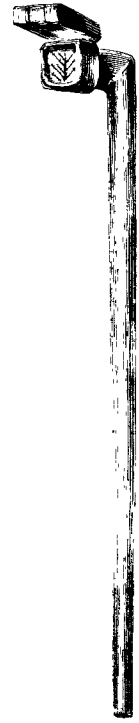


Fig. 50.



Fig. 51.



Fig. 52.

Figs. 48–52. Comb of bone ($\frac{1}{1}$); two bronze Pins ($\frac{1}{1}$); long-handled Comb of iron ($\frac{1}{2}$); and Comb of iron with loop handle ($\frac{1}{2}$), from Dunadd.

Pin, 3½ inches in length (fig. 49), with open circular head, carried on a projecting neck almost at right angles to the stem. It was found in a cleft of the rock, just under the surface, in the passage leading into fort A.

Iron Implements.—Comb of iron (fig. 51), with long handle, 6¼ inches in length, the upper part of the teeth covered with oxidation.

Comb of iron (fig. 52), single-edged, 4 inches in length and 2¾ inches in width, with open curved handle at the back, the body of the comb and upper part of the teeth also encrusted with a mass of oxidation.

Eight tools, all of the same form (fig. 53), and almost of the same size, 5½ to 4 inches in length, and ½ to ¾ inch at the widest part, with a long slot in the upper part, and tapering to a point below.

Nine Knife-blades with tangs, from 4¼ inches to 3½ inches in length, of which one is shown in fig. 59.

Seven Spear-heads, with sockets more or less complete, from 7½ inches to 3½ inches in length. Four of these are shown as figs. 55–58. They were all found in the fort D.

Portion of the point end of a double-edged Sword-blade, 7½ inches in length, and 1½ inches in width.

Two thin convex Discs, 3 inches in diameter.

Penannular Ring (fig. 54), 5 inches in diameter, with recurved ends.

Flattened Ring, 4½ inches in diameter, with flanged edges, and two other flattened rings, also 4½ inches in diameter, corroded together.

A Knife-blade still in its handle of wood is shown in fig. 60: total length of blade and handle, 7 inches.

A large iron staple, and a number of broken and corroded fragments of various iron implements of indeterminate use.

Undoubtedly the most interesting objects in this group of relics from Dunadd are the crucibles and moulds, testifying to the proficiency of the occupants in the art of casting in bronze. The crucibles are of two kinds: a large cup-shaped variety (fig. 39), capable of holding a considerable quantity of metal, and a smaller size (figs. 36–38), shaped like the bowl of a big tobacco-pipe, and having a side-handle for lifting it by. Of the



Fig. 53.

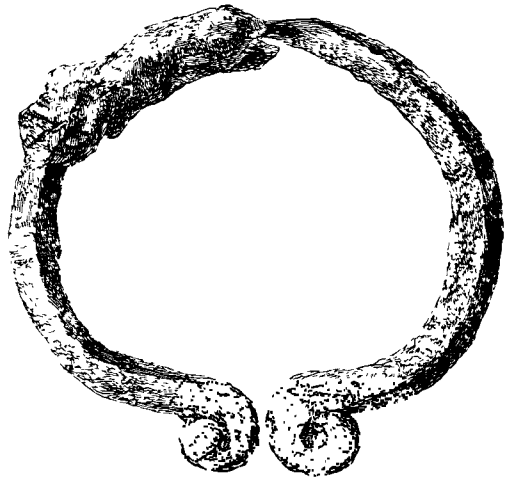


Fig. 54



Fig. 55.



Fig. 56.



Fig. 57.



Fig. 58.



Fig. 59.

Figs. 53–59. Iron Implement with longitudinal slot ($\frac{1}{2}$): Knife-blade ($\frac{2}{3}$): four Spear-heads ($\frac{1}{2}$); and penannular Ring of iron with recurved ends ($\frac{1}{2}$).

larger size there is one example entire, and several fragments which may belong to two or three more vessels. Of the smaller size there are four examples. Two have the remains of the bronze still adhering to them. The moulds are of two varieties, the larger sizes in stone and the smaller in clay. The most common form of mould in stone is that for a straight bar, varying from 2½ to over 10 inches in length. There is a dainty little clay mould (fig. 35) for a small penannular brooch, less than an inch in diameter. There is also on the smooth surface of a very fine-grained stone an outline drawing (fig. 31) of a penannular brooch with expanded ends, ornamented with five bosses. It is of the nature of a working sketch, the details being filled in for one-half of the brooch only. Of the manufactured bronze there are two fine pins (figs. 49, 50), each about 4 inches in length, both carrying their heads projected forward.



Fig. 60. Iron Knife still in its handle (⅓).

There is evidence, too, of the working of the coarse variety of jet or lignite, or cannel coal, so often employed in Scotland for the making of such ornaments for the person as necklaces and arm-rings or bracelets. We have here evidence of the whole process, from the crude fragment with the blocking outlines roughly drawn on the surface, to the flat disc cut out of the opening of the bracelet and the flat ring which was to be ground down to the proper shape, and portions of the finished bracelets, more or less complete. Of bone, there is a double-edged comb (fig. 48) about 2½ inches in length, made in the usual way of several pieces fitted together and kept in place by a band of bone about half an inch in breadth, which passes along the centre of the comb on each side and is secured by iron rivets. This comb is prettily ornamented by dots and circles, alternating with circular pierced openings at either side, and the central band has a double row of zigzag

carving. A part of a cylindrical piece of bone (fig. 47) is ornamented with pairs of circles with central dots, each pair being connected by two parallel lines less than a tenth of an inch apart. The only other bone instruments are two stout pins (figs. 45, 46) and a punch.

Among the most interesting of the stone objects are the small Disc (fig. 32) with the words IN [N]OMINE incised in lettering bearing a strong resemblance to Irish minuscules, and the Stone with the drawing of the penannular brooch already mentioned. There is another stone with a drawing (fig. 30). It is a splinter of soft slaty rock, somewhat waterworn, and bears on two different levels of its broader side a design like a square-headed cross and a nondescript scribble of scrolls. A rather surprising item among the stone implements is the stone ball (fig. 33) with six circular projecting discs. Of all the many examples we have and know, this is the only one that has hitherto been found with definite associations. There is also one of those small whetstones of quartzite (fig. 27) which have been hitherto found singly and with no definite associations. Among the polishing stones, of which there are a great many of various shapes and characters, there is one which may have been used to give the finishing polish to the jet bracelets of semicircular section; and the same may be said of a thin piece of sharp sandstone, the edges of which have been worn into semicircular hollows of different diameters, probably in the same operation. There are also well-made and well-used circular rotating grindstones of sharp sandstone.

Of the oval-shaped quartzite pebbles, with narrow oblique hollows worn in the middle of their flatter faces (as in fig. 28), there are no fewer than seven. These are a well-known type of Iron Age implement, though their exact purpose is not well understood. They are not uncommon in Norway in the first division of the Iron Age, and we have them also occasionally from the brochs. Of whetstones, with a perforation for suspension at one end, there are three. A few stone whorls testify to the use of the spindle and distaff; and there is a portion of a steatite cup with a moulding round the circumference underneath the brim, which is analogous to the steatite cups found occasionally in

the brochs. Two upper quern stones of elegant shape have been selected from the many found. One of these is specially interesting, because it is signed near the edge with a small cross-potent. Although some of the pottery is hand-made and unglazed, the bulk of it is wheel-made and glazed, the unglazed appearance of some of the wheel-made vessels being due to the glaze scaling off, as happens with much of the older pottery of this description.

Taking the iron articles as a group, they show a very considerable exercise of the smith's industry. There are eight or ten spear-heads (figs. 55-58), and about the same number of knife-blades, one of them (fig. 60) still in the handle. Of three large rings, one has the peculiar section of a bronze caldron ring. Another large iron ring (fig. 54) is penannular and has the ends turned back circularly. The most curious things, however, are the implements (fig. 53) shaped like the legs of a pair of adjustable compasses, of which there are seven or eight. They are nearly all about the same size, 5 to 6 inches long, and I am unable to offer even a suggestion as to their probable purpose. The occurrence of combs in iron is also a new feature. Here we have the round-backed comb (fig. 52) with the back forming a loop-handle, and the long-handled comb (fig. 51), in iron for the first time. The round-backed comb of this form and of largish size occurs in Denmark and Norway in their Older Iron Age, but I have not met with any example of the long-handled comb in iron.

The results of the excavation of these four forts are certainly the most interesting and important that have hitherto been obtained from any exploration of native sites as yet undertaken by the Society. They not only present a considerable number of new types of objects, but they have also greatly extended our knowledge of the associations of objects of previously known types which, however, had not hitherto been found in associations assigning them to any well-defined period. We have now obtained a large group of objects which are definitely associated with the group of forts, and from which the relations of the forts themselves to the later period of the Iron Age, in post-Roman and Early Christian times, are conclusively demonstrated.

MONDAY, 10*th April* 1905.

ROBERT MUNRO, M.D., LL.D., Vice-President, in the Chair.

A Ballot having been taken, the following were duly elected Fellows:—

DONALD CAMERON-SWAN, Sanderstead, Surrey.
THOMAS MAULE GUTHRIE, Provost of Brechin.
ROBERT YOUNG, 39 Leamington Terrace.

The following Donations to the Museum and Library were laid on the table, and thanks voted to the Donors, a special vote of thanks being awarded, on the motion of the Chairman, to Erskine Beveridge, LL.D., F.S.A. Scot., of Vallay, and St Leonards Hill, Dunfermline, for his valuable and very acceptable gift to the Library of a copy of the *Dictionary of National Biography*, an indispensable work of reference, in sixty-nine volumes, which there was no doubt would be much used and greatly appreciated.

(1) By ROBERT CHRISTISON, Cannon Place, London.

A Collection of Native Weapons and Implements from Mitchell District, North Queensland: including one Stone Axe, in a handle of bent withe, 15½ inches in length, and wrapped round with sinews of the kangaroo's tail; one Fire-making Apparatus, consisting of a split branch of soft dry wood 16 inches long, and a knife-like piece of tougher wood 11 inches long, which is rubbed backwards and forwards in a groove made across the other stick; four *Bibboos*, or Fighting Knives, of quartz, in handles; one *Bibboo*, made from a steel blade of sheep-shears; three Fighting Clubs; two Stones for pounding or grinding wild-grass seeds; one Shell Ornament; one Necklace of reed-joints; one Loin Covering; one Net Girdle; and one Fly-fan of emu feathers.

(2) By the Edinburgh Cemetery Company.

Portions of an Urn of food-vessel type, 5 inches in diameter, and ornamented with impressed lines of a twisted cord, from a cist in North Merchiston Cemetery.

(3) By Mr James Smith, Pinewood, Crathes.

Fragments of a finely ornamented Beaker Urn, found in a cist at Balbriddie, near Crathes, some years ago.

(4) By John Bruce, F.S.A. Scot., Helensburgh.

Small polished Axe of greenish stone, $1\frac{5}{8}$ inches in length, from Montego Bay, Jamaica.

(5) By R. C. Haldane, F.S.A. Scot.

Rude Crucifix of bone, $2\frac{1}{4}$ inches in length, found in the garden at Lochend, Northmavine, Shetland.

(6) By Rev. William Blair, D.D., F.S.A. Scot.

A Visiting Card of James Hogg, the Ettrick Shepherd, bearing no name, but only the words "The Ettrick Shepherd." In a note accompanying the donation Dr Blair says:—"I received it as a gift from Miss Fletcher, of Dunblane, sister of Rev. Dr Alex. Fletcher, London. Dr Fletcher's father, Rev. W. Fletcher, minister of Bridge of Teith, Doune, was a native of Ettrick Forest, and was baptised by Rev. Thomas Boston. His mother was a Laidlaw, and a relative of the Hoggs. Hence, when James Hogg visited London in 1831, and was feasted by the literati and public men of the metropolis, he called on Rev. Dr Fletcher, his countryman and relative, and left the card which I now dispone to the Society of Antiquaries of Scotland. The Ettrick Shepherd died 21st November 1835, now nearly seventy years ago."

(7) By ERSKINE BEVERIDGE, LL.D., F.S.A. Scot.

Dictionary of National Biography. Edited by Sir Leslie Stephen and Sidney Lee. With Supplement, Index and Epitome, and Errata. 69 vols. 8vo. 1885–1904.

(8) By HENRY TAYLOR, F.S.A., Birklands, Southport.

Ancient Crosses and Holy Wells in Lancashire—The Hundred of Lonsdale. (Reprint.) 8vo. Pp. 110.

(9) By THOMAS MAY, F.S.A. Scot., the Author.

Excavations on the Romano-British Site at Wilderspool and Stockton Heath, 1901–04. 8vo. Pp. 32.

(10) By COLIN LEITCH, F.S.A. Scot., the Author.

Ardrishaig and its Vicinity. 8vo. Pp. 32.

The following Communications were read :—

I

THE ORNAMENT OF THE BEAKER-CLASS OF POTTERY.

By The Hon. JOHN ABERCROMBY, Secretary.

After studying the form of the beaker types and placing them in what seems to be their approximate chronological order (*P.S.A.S.*, xxxviii 323–410), it remains to examine the decoration applied to the surface. The style of ornament is strictly geometrical: the execution is often not very exact, and sometimes the design is rather suggested by a series of rapid scratches than actually delineated: occasionally, however, the lines are very firmly and carefully drawn. At so early a time as the period when beakers were in use, we are entitled to suppose that no profession or caste of potters existed, but that the vessels were manufactured as occasion required by the women of the family. For this is still the almost invariable practice of savage and barbarous peoples. As the pottery at this early date was very imperfectly baked in an open fire, the consumption of domestic vessels, due to breakage, must have been considerable. To maintain the supply of domestic pottery the constant manufacture of new pieces became a necessity, and in this way some of the women would gain considerable practice both in making and in decorating vessels. It was mentioned in the above paper that the form of the beaker was the result of tradition: and as each generation had inferior models to imitate, a disadvantage which increased progressively as time went on, the whole tendency of the form was from good to bad, and from bad to worse. It was not necessary, however, that degeneration of form should be accompanied by an equal degeneration in the ornamentation. The women felt that in the matter of decoration they were less tied down. In this field their fancy and imagination were allowed freer play, and they were able to introduce patterns adapted from their other occupations, such as plaiting, weaving, and basket-work

The actual elements which make up the decorative system of the beaker period are as simple as possible. They consist of short straight lines and combinations of lines, such as



Very rarely were employed curved lines)))) made with a pointed tool, or perhaps with a finger-nail. Such simple motives were seldom used alone; they were almost always combined to form either a border or a surface pattern, and each motive is usually separated from its neighbour by two or three lines. As originally and in all the earlier beakers, an ornamented band is isolated from the next by a plain band. I take the band as the unit, and in the illustrations given on the accompanying plates each figure shows the whole depth of the band when practicable.

The two main principles that guided and actuated the decorator were (1) variety and (2) contrast: the principle of symmetry, though it had a place in the mind of the operator, was less prominent. A few examples in which the simplest motives are used will illustrate this statement. If at starting the motive consisted of a double row of short horizontal dashes, it might be contrasted with a row of curved nail-marks, and this by a border of hanging triangles, horizontally shaded, as in No. 1 (α). In No. 2 (β) a lattice border is contrasted with several horizontal lines, and these with a border of "herring-bone." In No. 3 (γ) a border of vertical strokes is opposed by a lattice border, and the whole design is set off by a fringe of slanting lines above and below. In No. 4 a border of vertical lines serves as a foil to a lattice border, the verticals are repeated, and followed by a border of sloping lines. Here we notice that three-quarters of the design is symmetrically ordered, and in drawing the lowest border that the sentiment of variety has prevailed over that of symmetry. A similar remark applies to No. 5 (β). In Nos. 6 and 7 (γ) the same decorator, working on the same vessel, first contrasts a bar-chevron border with a "herring-bone"

motive, and then with a border of short verticals. Sometimes symmetry was combined with variety and contrast, as in No. 8 (γ), where a central border of short verticals is flanked by a plain bar-chevron border on each side, and the whole is included within an upper and lower fringe of zigzags. Other examples of the combination of the three principles are exhibited in Nos. 9, 10 (γ). In the last the same motive is repeated thrice, and the central one is very properly made larger than the flanking ones.

Decoration in Compartments.

Hitherto the scheme of ornament under consideration has been arranged in continuous horizontal lines running round the beaker. Now we have to notice another in which the scheme is discontinuous, in which the ornamental zone is divided laterally into compartments or panels, each differing from its neighbour. The contrast has now to be looked for in a lateral, not in a vertical, direction. In No. 11 (α) a partly shaded line-saltire is contrasted with a row of vertical lines, while below it is a chequer pattern, shaded in different ways, on each side of a blank square. In No. 12 (α) each plain bar-saltire is partly shaded, is flanked on each side by a vertically shaded bar, and is separated by a blank space from the saltires on each side of it. In No. 13 (α) each plain bar-saltire is shaded to enhance the effect, and surrounded by a frame of lattice border. A more elaborate scheme is found in No. 14 (α), where a plain bar-lozenge surface pattern on a shaded ground is opposed to a laterally placed, plain bar-chevron border on a shaded ground, and set vertically. These four examples belong to the first half of the beaker period, and to the southern part of Great Britain. The next two, Nos. 15, 16 (α), both from the same beaker, belong to the third quarter of the period, and come from Aberdeenshire. Here we are struck by an excessive fineness of line and minuteness of ornament, which is very characteristic of North Britain. In Nos. 17, 18 (γ), both from the same Lanarkshire beaker, the principles of contrast, variety, and minute subdivision are carried to excess, and the

result is not very striking: the bolder examples, Nos. 19, 20 (β), from Stirling and Banffshire, are more effective.

Distribution of Decorative Motives.

The preceding paragraphs have dealt with the principles of design and ornamentation which hold good for all three types of beakers. Now we have to take into consideration *seriatim* the leading decorative motives, and observe their geographical distribution as well as the periods to which they belong.

Chequer motives in black and white, such as Nos. 21–24, belong to the earlier half of the beaker period, and are not found north of Yorkshire. But a chequer of spaces, shaded alternately with horizontal and vertical lines, like the lower part of No. 11, is found in Derbyshire (B. 11), Fife (B. 43), and Banff (B. 168a), and continued to the end of the period.

A *stripy pattern*, like No. 25, either as a surface pattern or combined with other motives, as in No. 26, belongs to the beginning of the period, and is confined to the south of England.

The *bar-lozenge*, either plain or shaded, and employed as a border or a surface pattern, appertains in type to the first half of the period, and does not occur north of Yorkshire. The shaded bar-lozenges, Nos. 27, 28, are from the same beaker, which was found with a fine flint dagger, and are therefore of a very early date. No. 30 is an example of the sketchy impressionist manner of dashing off a motive, similar to the above, and is somewhat later. The next example, No. 29, seems to find its place in the third quarter of the period, and belongs to type β. In the same beaker thus ornamented were found three remarkable objects in the form of solid chalk drums, covered with geometrical and circular motives, including representations of the human face, such as are found on the face-urns from the second city of Troy, on the walls of sepulchral caves, and on menhirs in France. They are partly figured by Canon Greenwell in *Archæologia*, lii., pls. 1, 2, and in the British Museum *Guide to the Bronze Age*, figs. 86, 87. The plain bar-lozenge

serving as a frame round a shaded line-lozenge, is a commoner expedient for producing a lozengy effect; for example, Nos. 14, 31–35. All these belong to the first half of the period and to the type *a*. A plain bar-lozenge enframing a plain line-lozenge only occurs once, No. 36, and belongs to the same time and type as the above.

The *plain-line lozenge* border, with the adjacent triangles shaded like Nos. 37, 38, is confined to the south-west of England, and belongs to the earlier period.

It is true that a shaded bar-lozenge effect is twice found in Scotland, Nos. 39, 41 (*γ*); and a plain line-lozenge, No. 40, occurs on the same beaker as No. 41. But in each case the lozenge is traversed by a horizontal line, or by a bar, showing that the result is obtained indirectly by an arrangement of opposed triangles. Both beakers belong to the last quarter of the period.

The *plain bar-chevron surface pattern* on a shaded ground, or a *shaded bar-chevron* on a plain ground, sometimes lends itself to a lozengy effect, as in Nos. 42, 43, 45, 46, but not necessarily Nos. 44, 47. In time this motive covers more than the first half of the beaker period, and ranges over the whole of England. All the examples belong to type *a*, except No. 45 from Forfar, which belongs to type *β*, and seems to be the latest of all.

The *plain bar-chevron border* on a plain or shaded ground, although it is so simple, is found chiefly north of the Humber, in types *a*, *γ*.

In time it seems to come down later than the above. Examples are seen in Nos. 6, 8, 14, 29 (upper part), 48–50, the latter being from Wilts.

The *shaded bar-chevron*, either as a border or a surface pattern, is very rare: a Suffolk example of the former is shown in No. 51, and of the latter in No. 73. But the *effect of a shaded bar-chevron* is equally well produced by three or more parallel line-chevrons. This is a very common form of it, especially in the North, in the later examples of type *γ* and once in *β*,—*e.g.* Nos. 52–54. This motive does not occur south of the Humber.

Two parallel line- or bar-chevrons, spaced, with their *opposite angles connected by lines*, seems to be a special northern development, reaching from Staffordshire to Ross. Such are Nos. 55–58, 20. This motive begins in the second quarter, and continues till nearly the end of the beaker period. It is found in all three types.

The *triangle border* of small, hanging triangles, constructed either with lines or narrow bars and shaded, is common to all the types, and extends over the whole of Britain. Such are Nos. 1, 59–63. This motive is found throughout the whole beaker period, and was originally brought from the Continent. I assume it as self-evident that the shaded triangle is the one to which the decorator wished to draw attention, and that the plain triangles on each side constitute the ground which gave relief to the shaded triangle.

The *elongated triangle border*, bounded either by a line or a narrow bar, is common to all the types; such are Nos. 64–66. These three examples belong to the first half of the period: and it will be observed that the shading is made with straight lines, though it must be stated that similar shading survived into the later half of the period. But before the end of the earlier half the shading of triangles by cross-hatching or by means of broken lines makes its first appearance in Staffordshire in No. 67, and is not found south of that county. The latter method receives a very special development north of the Tweed, — *e.g.* Nos. 68–71. In the last example, which belongs to a very late time, it will be noticed that the upper and lower row of triangles are united, so to speak, by two invisible triangles, for the shading of the flanking triangles of the upper row is the same as the central one of the lower row: and conversely. No. 72 is an example of a bar-triangle surface pattern, in which the shading is effected by broken lines. The cross-hatch is once employed in a bar-chevron border, No. 73, which is nearly contemporary with No. 72, and twice in a hexagon, Nos. 77, 80.

A *double border of triangles*, shaded, and *separated by one or more horizontal bars*. It has already been seen that the lozenge patterns

north of the Tweed differ from those in the south by being traversed by a horizontal line or by a bar. This special development, applied to a double border of triangles, begins in the second quarter of the period, and appears almost simultaneously in types α, β, in Nos. 67 (α), 74 (β), which are almost contemporary. Nos. 71, 75 are later than these, and No. 76, where the bar is multiplied by three, is again slightly later. This peculiarity occurs in all three types, and continues to the close of the period.

The *hexagon*, either as a border or a surface pattern, is presented in two ways: with the acute angles lying along (1) a vertical or (2) a horizontal line. This motive makes its appearance about the middle of the period in No. 77, and continues to the end, Nos. 77–81. No. 79 is taken from a beaker figured, not over well, in the *Archæol. Journ.*, xiii. 86, and appears to belong, like most of the others, to sub-type α6. This motive is confined to England, and does not occur north of Yorkshire.

Fringes.

The fringe is a decorative encroachment on the plain band which borders the ornamented zone on each side, and is interesting from exhibiting a progressive development from simple to more complex forms. The fringe appears first at the end of the first quarter, in a very simple form, as an edging of very short, perpendicular strokes, No. 82, on B. 12, 40, etc.; or of a low line-chevron, No. 83, on B. 23, 143, 163, etc.: or of slanting strokes, No. 84, on B. 24, 36, 101, 167, etc. These simple fringes continue to the end of the period, are common to all the beaker types, but do not occur south of the counties of Derby and Stafford.

No. 85 is rather less simple in form, is common to types β, γ, and is not found south of the Humber. Examples are to be seen on No. 29 and B. 104, 121, etc.

No. 86 appears first in Northumberland at the beginning of the last half of the period, and is not found south of that county. It occurs in types β, γ, and is seen on B. 101, 118, 156, etc.

No. 87 begins rather later than No. 86, covers the same area, and also occurs in types β, γ. Examples are seen on B. 128, 135, 121, etc.

No. 88 is found on a single example, B. 136, from Aberdeenshire, and belongs to the beginning of the last quarter of the period.

Nos. 89, 90, found on the same beaker, B. 170, are from the county of Nairn, and belong to the close of the period.

Conclusion.

I have not drawn attention hitherto specially to the ornamentation of type β, but a glance at the illustrations B. 58–110 will show better than words the simplicity that characterises this type when compared with what is found on type α. Arguing on simply *à priori* grounds, we should be tempted to place type β earlier than type α, but reasons of an archæological nature stand in the way. It is clear the traditions of the two types were different from the beginning, both as regards form and ornament. The comparative complexity and richness of the decoration in type α need not cause astonishment, for even in the pure Neolithic Age of Denmark we find chequer patterns like No. 23; double triangle borders like No. 71, but shaded with dots; line-chevron borders like Nos. 53, 54 (Sophus Müller, *Vor Oldtid*, pp. 142–3).

The result of our analysis has been to show that some types of ornament are confined to certain large areas and to particular periods.

The *plain line-lozenge border on a shaded ground* and a *stripy pattern* made with small circular impressions are confined to the *south* of England.

Chequer motives: the *line-lattice surface pattern*, like No. 91; the true *bar-lozenge* in any form: the *shaded bar-chevron* border and motives composed of *hexagons*, are not found *north* of Yorkshire.

A special arrangement of *two parallel lines or bar-chevrons*, with their opposite angles united by lines; so simple a combination as a *trilinear*

herring-bone motive, like the upper part of No. 52: *shading* by means of *cross-hatching* or *broken lines*, are motives that do not occur *south* of Staffordshire.

A border of *three or more parallel line-chevrons* belongs to Britain *north* of the Humber.

As it has a bearing on the ethos and character of the people in Britain during the beaker period, it is not without interest to examine whether the beakers laid beside the bodies of women and children were inferior to those given to men. The evidence that bears upon this question is not very ample, but there are about thirty instances in which the age and sex of the individual is recorded, or may be inferred with more or less probability.

The following beakers were found with the remains of male adults: the numbers refer to the beakers figured in last year's paper.

B. 5, 30, 36 (?), 58, 60, 67, 123, 124, 125, 129, 144 (?), 165. Of these, B. 5. 58, 60, 67, 123–5 are very good, the ornament is often rich and is always well executed; B. 36, 144 are less richly decorated, and B. 30, 129, 165 are decidedly inferior.

With women, though in three instances the sex is not quite certain, were found B. 19b, 32, 56 (?), 92, 93 (?), 98, 99, 103, 130 (?), 139. The execution of 99, 103, 139 is excellent, and these beakers are quite on a par with the best of those found with males. B. 32, 56, 92, 98 are somewhat inferior, while 19b, 93, and 130 are poor specimens and the execution is negligent.

With children were found B. 12, 22, 27, 48, 49, 91, 115, 116, 117. Of these, B. 12, 22, 27, 115, 116 are of superior fabric, as good as any found with adult men or women. But B. 49, 117 are much inferior, and B. 48, 91 are of the poorest execution.

From the above we may conclude that both in form and ornament the beakers deposited with the mortal remains of women and children were, when at their best, as good as any laid beside the bodies of men. But the former at their worst were inferior to any that were deposited with adult males.

The Technique.

The instruments that seem to have been used to effect the ornamentation were—a notched tool, a blunt-edged tool, a pointed tool, a tube-like tool, a twisted cord, and the finger-nail.

T. 1. Impressions were stamped with a narrow, square-sided slip of bone or wood with small notches at intervals. This produced a line of small rectangular depressions, separated by a very thin wall or septum, —*e.g.* B. 7, 20.

T. 2. Deepish and broader lines, horizontal or vertical, were effected by a blunt tool, such as a slip of wood or bone, —*e.g.* B. 9, 10, 93.

T. 3. Thin lines were incised with a sharp-pointed instrument,—*e.g.* B. 63.

T. 4. Prick-marks, short dashes, and indentations were made with a more or less pointed tool or a sharp edge,—*e.g.* B. 54, 61 (2nd band), 71, 80.

T. 5. Small circular impressions were produced with a tube-like instrument, such as a reed or hollow stalk,—*e.g.* B. 1, 3.

T. 6. Impressions were made with a twisted cord,—*e.g.* B. 65, 72.

T. 7. Semicircular impressions were made, perhaps, with the finger-nail, though sometimes with the point,—*e.g.* B. 2.

In type α almost exclusive use is made of T. 1. Out of a total number of 57 beakers figured in my last paper, it is the sole technique employed in 36 instances: on 14 other beakers it is combined with another technique, so that altogether it occurs on 50 out of 57 beakers. It is found in all the sub-types, but occurs only twice in α 4, 6, respectively.

Other techniques used alone are, T. 3 on B. 56; T. 4 on B. 51, 53, 54, all of α 6.

The combinations are as follows:—

T. 1, 5 on B. 1, 3.

T. 1, 3 on B. 4, 17, 22, 25, 30, all of α 1, 2.

T. 1, 4 on B. 9, 10, 16; 18, 19: 40: 55, of α 1, 2, 4, 6.

T. 3, 4 on B. 12, 13, 26.

In type β, T. 1 is less usual. It occurs alone on 18 beakers out of 53, or on one-third of the whole type: in combination with other techniques it is found 7 times, or on 25 beakers out of 53. In sub-type β 3 it does not occur alone, and only once in combination.

The use of the twisted cord alone is found 9 times, and 3 times in combination. It occurs alone in β 1, 2, 3, and once in β 4 in combination.

T. 6 on B. 65, 70, 72, 73 (?); 79, 81–3: 92, of β 1, 2, 3.

T. 3 on B. 63, 66, 75: 91: 104, 105, 107, 110, of β 1, 3, 4.

T. 4 on B. 68, 71: 88, 89, 90, of β 1, 3.

T. 2 on B. 93 of β 3.

T. 1, 2 on B. 103. T. 1, 3, 4 on B. 61. T. 1, 3 on B. 87; 100.

T. 1, 4 on B. 80; 99, 101 of β. 2, 4.

T. 3, 6 on B. 102. T. 4, 6 on B. 76: 86 of β 1, 2.

T. 3, 4 on B. 106.

In type γ, T. 1 used exclusively occurs on 21 beakers out of 62, almost exactly the same proportion as in β; but in combination it is also used 21 times, or on 42 beakers out of 62. It belongs to all the sub-types.

T. 3 alone, which is only once used in type α and 8 times in β, occurs 17 times in type γ; in combination it is found on 10 other beakers, or on 27 out of 62, compared with 6 examples out of 57 in type α, and 13 out of 53 in type β.

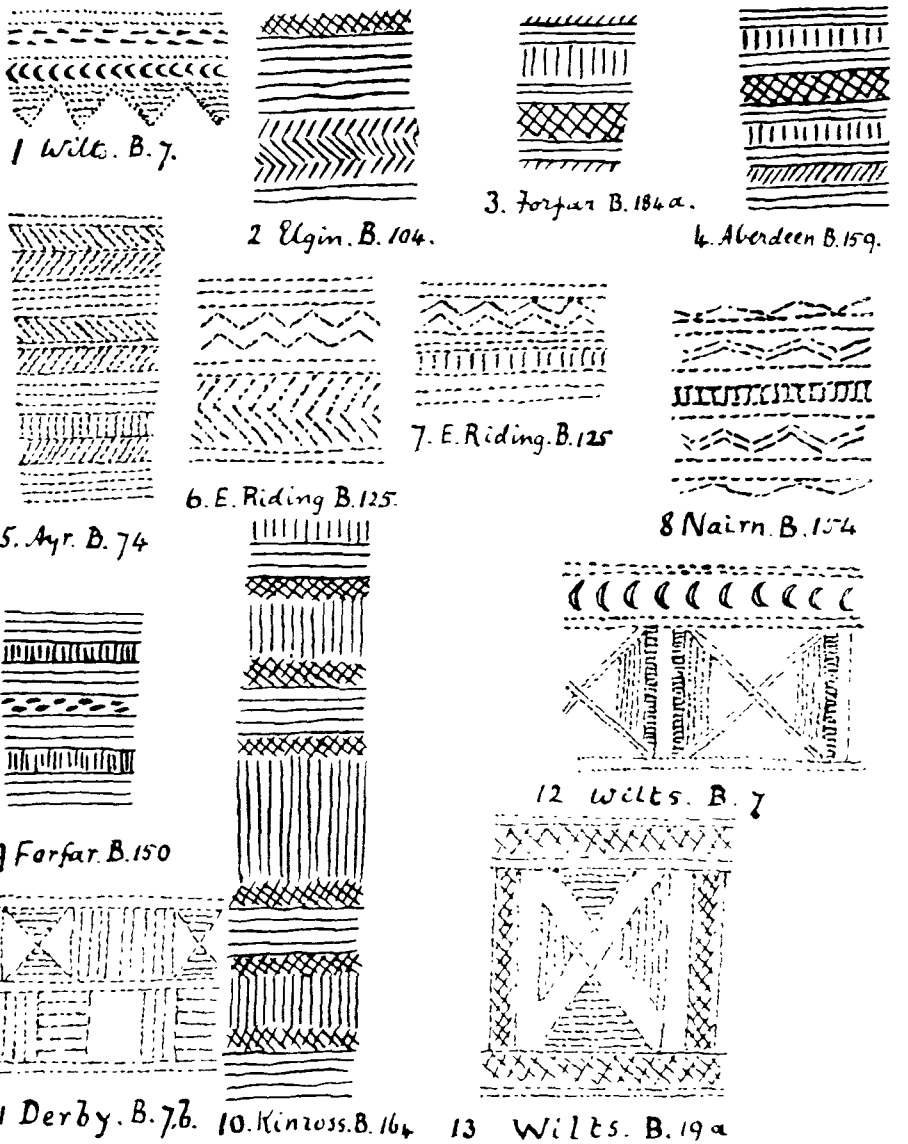
The combinations are: T. 1, 2 on B. 112. T. 1, 4 on B. 111, 120, 122: 130: 150, 156, 158: 168, of γ 1, 2, 4, 5. T. 1, 6 on B. 114. T. 2, 4 on B. 117. T. 3, 4 on B. 143. T. 1, 2, 4 on B. 118, 140.

On Continental beakers that belong to or approximate type β in form, the incised or stamped lines of ornament are often filled with a white incrustation. In Britain this technique is extremely rare, though in some cases the stuff may have fallen out. The only example I know of

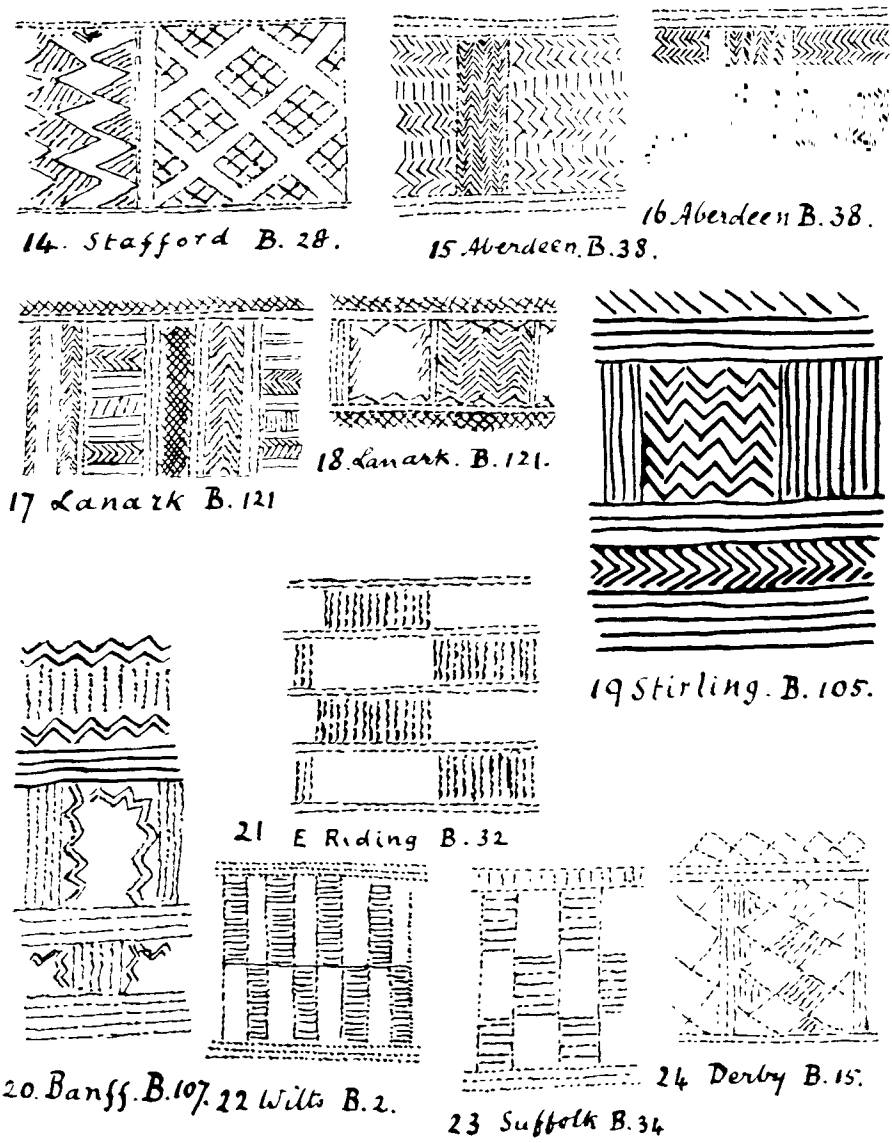
in England is B. 58 from Wilts, but there are certainly 2 in Scotland—B. 43 from Fife and B. 122 from Aberdeenshire. The white matter from the Fife example was analysed by Professor Olshausen, and found to be composed of phosphate and carbonate of lime, probably the result of burnt bones (*Zeitschr. f. Ethnologie*, 1898, p. 546).

ERRATA.

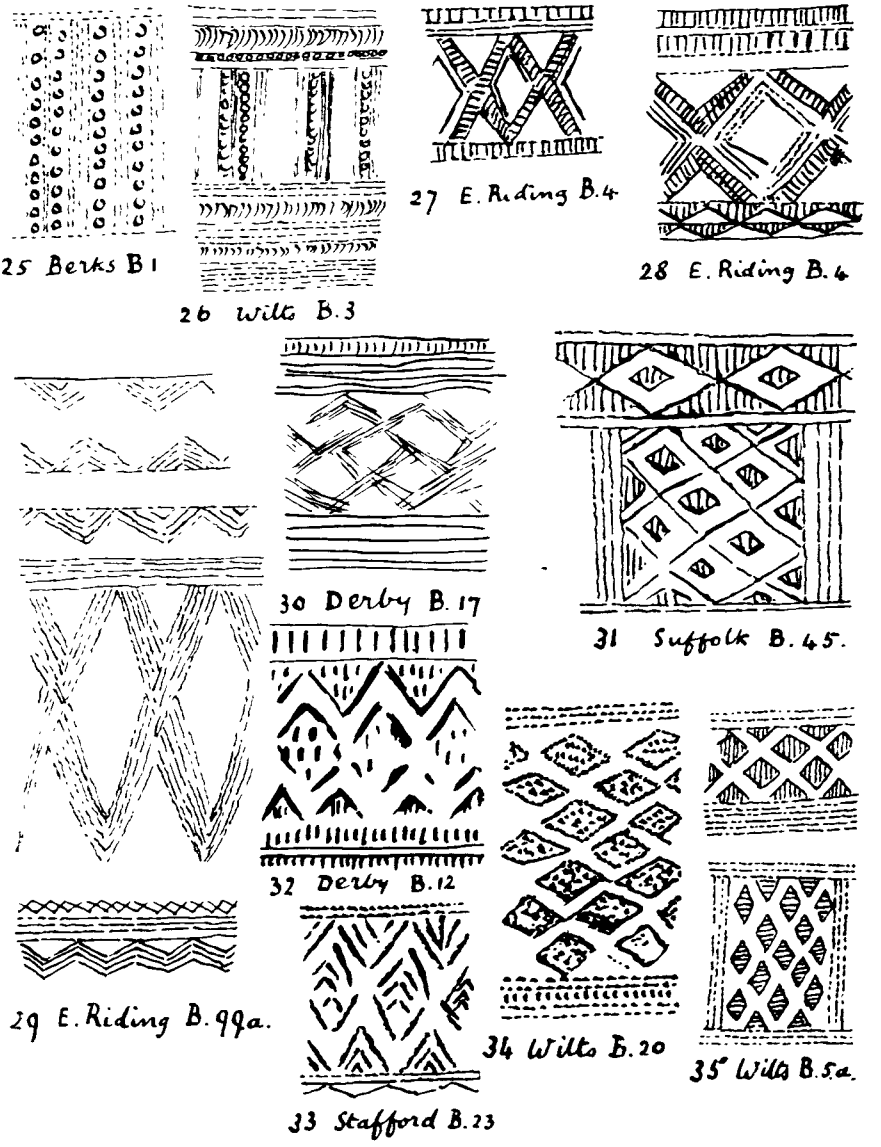
P.S.A.S., xxxviii. p. 341, *for* "Turiet Burn, North Toridale" *read* "Tarset Burn, North Tindale." Diagram II. : remove the figures 123–125 from the head of γ1 to γ2.



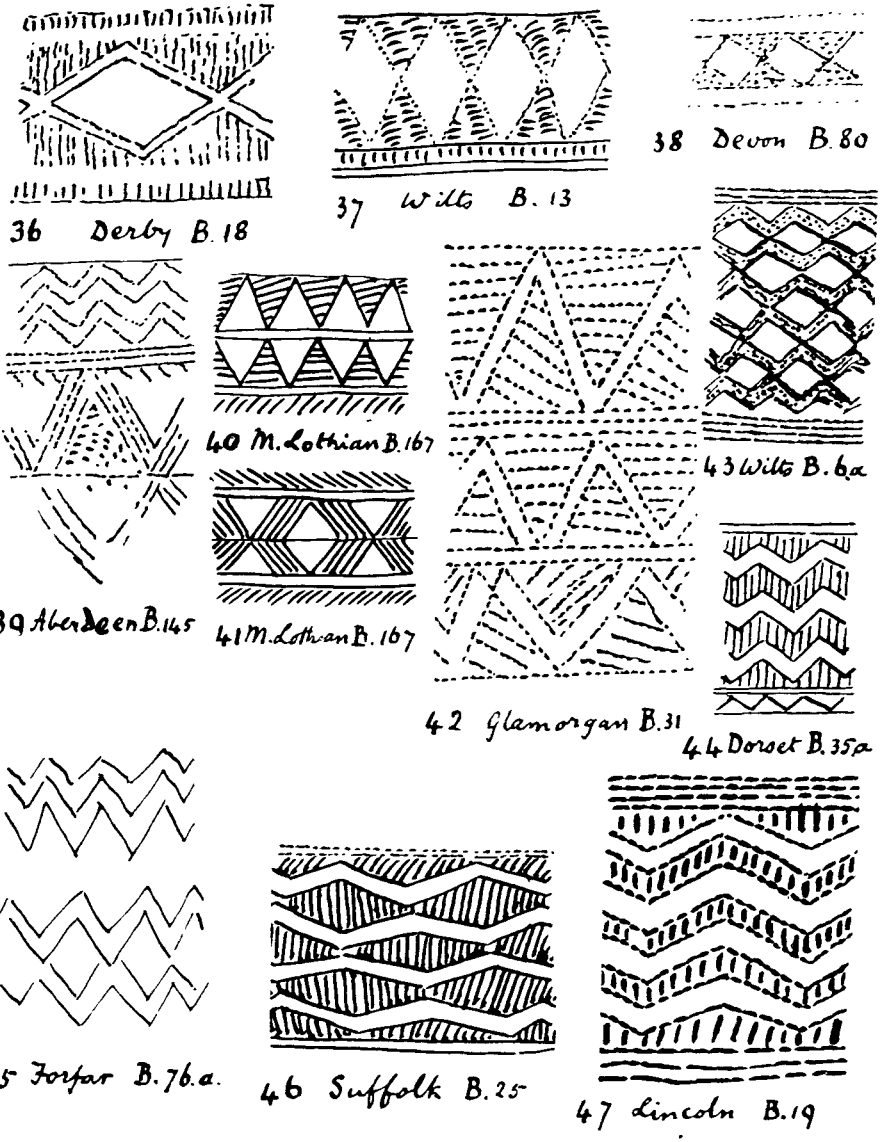
Ornament of the Beaker-Class of Pottery



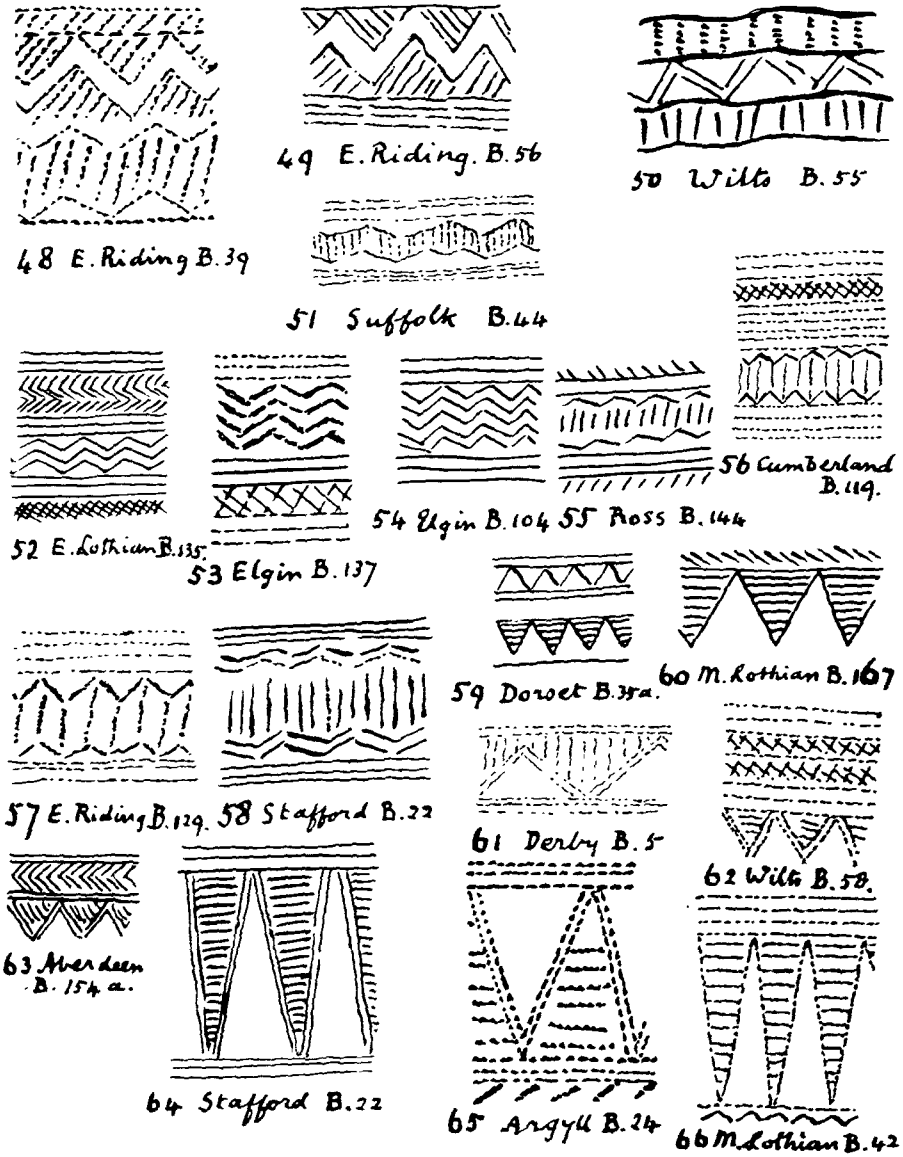
Ornament of the Beaker-Class of Pottery.



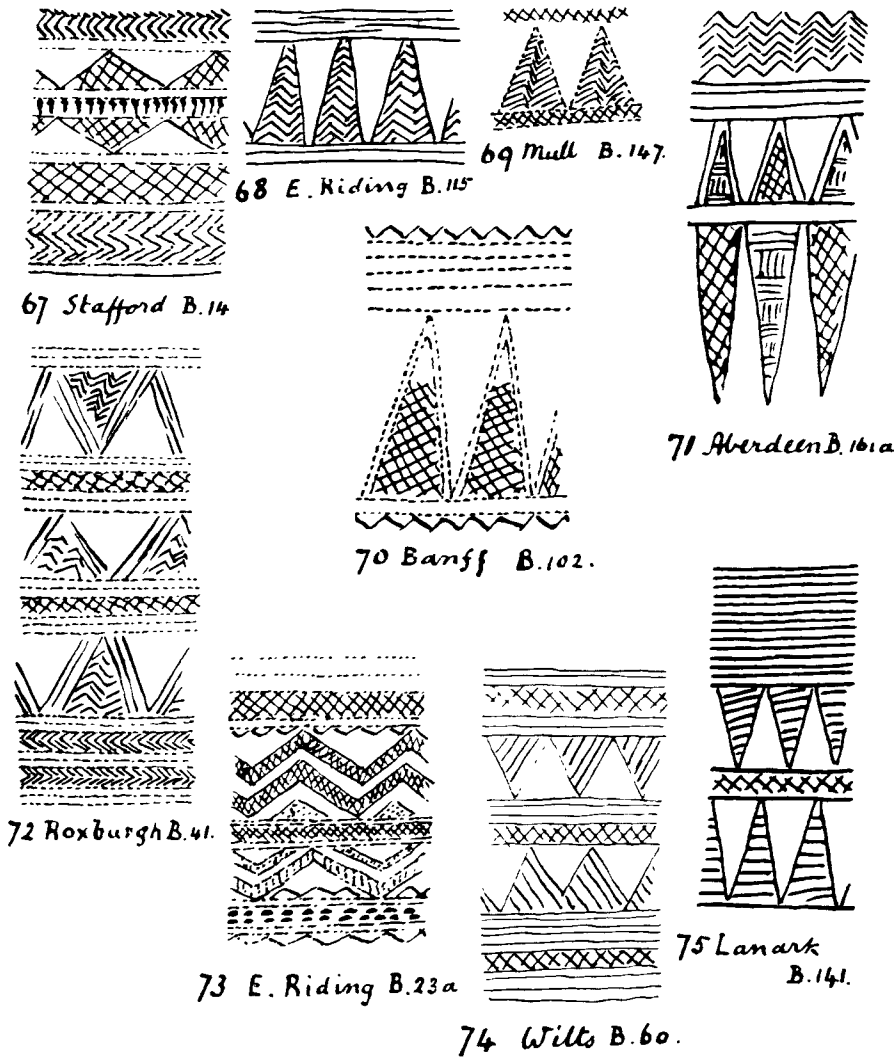
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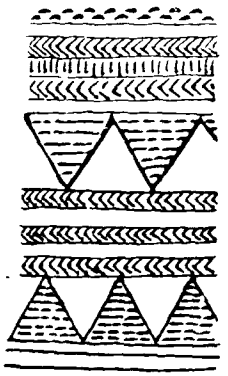
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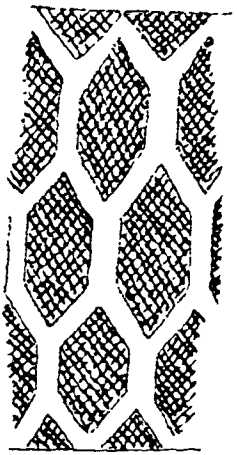
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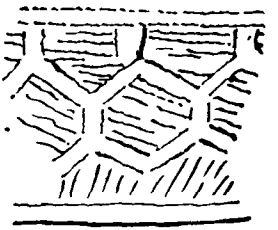
Ornament of the Beaker-Class of Pottery.



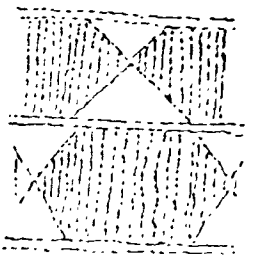
76 Aberdeen B. 163.



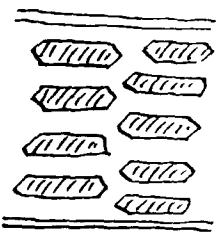
77 E. Riding B. 27.



78 Oxford B. 51



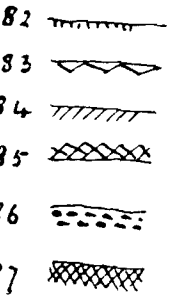
81 Anglesea B. 57a.



79 Lincoln



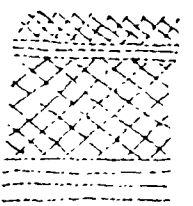
80 E. Riding B. 56



82
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91 E. Riding B. 129

Ornament of the Beaker-Class of Pottery

II.

NOTE ON TENTS MOOR, FIFE, AND ON FLINT ARROW-HEADS, IMPLEMENTS, ETC. FOUND THERE.

By the Rev. ROBERT PAUL, F.S.A. Scot., Dollar.

Tents Moor forms the extreme north-eastern corner of the county of Fife, lying between the estuary of the river Tay on the north and the river Eden on the south. If we take the North British Railway line between Leuchars and Tayport as its boundary on the west and the sea on the east, it is about six miles long by three broad. The larger part of it is in the parish of Leuchars, though a small portion of it, towards the northern end, is in that of Ferry-Port-on-Craig, or Tayport, to give it its modern name. The entire district consists of sandy bent or downs, covered with coarse grass and whins, and here and there a little heather. It owes its formation, in all probability, to the deposits laid down by the rivers Tay and Eden, and was apparently at one period quite under water, as sea-shells and waterworn and rounded stones and pebbles are everywhere to be found over its surface. At no very distant period it seems to have been somewhat thickly inhabited by a number of small crofters, but it is now divided into several extensive farms. The greater part of it, however, is incapable of cultivation, in consequence of the sandy and shifting character of the soil, though patches of arable land are here and there to be seen. The strong winds from the North Sea which sweep with great force over its flat surface, especially in spring and autumn, make almost every year an appreciable difference in its conformation. The land is therefore mostly used for the feeding of sheep and as rabbit warrens.

All over this tract of country traces of various kinds are to be found of the inhabitants who occupied it at different periods. A good many years ago, having occasion to visit the neighbourhood frequently, I had several opportunities of exploring it, when the flint arrow-heads, beads,

coins, pins, etc. now produced were found by myself and some friends who were with me.

The remains of numerous kitchen-middens are to be found in different parts of Tents Moor, the contents of some of them being much scattered, and some occurring alone, and not in groups, especially in the northern portion included in the parish of Ferry-Port-on-Craig. A large group, however, is situated towards the southern end of the district, at the distance of about half a mile, nearly due west, from the mouth of the Eden.

This group consisted of some eleven or twelve distinct mounds, running N.E. and S.W., and varying considerably in height, size, and shape. The largest of all was about 9½ feet high; the next in size about 9 feet high and 66 yards in circumference: while other two were found to be 8 and 5 feet in height respectively. Like many of the Danish "kjokken-moddings," those on Tents Moor are all about 10 feet above the sea-level, and about half a mile from high-water mark. It is possible, however, that at the period of their formation they were considerably nearer to the sea, since the rivers Tay and Eden are constantly depositing large quantities of sand and mud along the coast, a process which is clearly seen at the mouth of the former, where what are known as the Abertay Sands—so fatal to vessels in stormy weather—are being rapidly increased in size, and bid fair by and by to enlarge very considerably the solum of this tract of country. I was told by a retired naval officer, long resident in the locality, that almost every year the fairway of the river Tay was shifting farther to the north and east, in consequence of the growing accumulations in the neighbourhood of the Abertay Sands.

The shells of which these kitchen-middens are composed consist exclusively of four species, viz., the cockle (*Cardium edule*, L.), the mussel (*Mytilus edulis*, L.), the periwinkle (*Littorina littorea*, L.), and the common whelk (*Buccinum undatum*). The cockle and mussel shells largely predominate in the mounds towards the southern end of the district, near the mouth of the Eden, while in those towards the

northern end, nearer the estuary of the Tay, the cockle is not to be found at all, the whelk, however, being much more abundant in the latter than in the former. It is an interesting fact in this connection, that at the present day the cockle lives and thrives in the sea at the mouth of the Eden, while it is practically unknown on the northern coast of Tents Moor, bordering on the estuary of the Tay, showing thus that the habitat of these species of shellfish has not changed even after the lapse of centuries, since these kitchen-middens were first formed. In the case of the few mounds which I was able to examine particularly, no flint implements or fragments of pottery were found, and only one fragment of bone, split open longitudinally to extract the marrow, in one of the mounds towards the north. Flint arrow-heads and knives and scrapers, however, are to be found in considerable quantities over almost the entire area. Not far from where the largest group of mounds is situated, near the mouth of the Eden, there seems to have been a regular manufactory of arrow-heads, scrapers, etc., judging from the number which have been found there, and from the number of nodules of rough flint and innumerable flakes and splinters of flint which everywhere abound. In this vicinity a rounded hammer-stone with abraded ends was found.

Not a few implements of larger size have, I understand, been found by other explorers from time to time. Two of these, a small whetstone of quartzite, perforated at one end, and another small whetstone of micaceous sandstone, were exhibited to the Society in 1890 (*Proceedings*, vol. xxiv. p. 382). Large quantities of fragments of coarse pottery are turned up over the whole district whenever the soil is disturbed. Cinerary urns have also been met with. A fine specimen of the "drinking-cup" or "beaker" type of urn found here is figured in the Society's *Proceedings*, vol. xvii. p. 384.

The small whorl, two brass pins, and the six small coins now produced were found by me on the sites of some of the old houses: also the three glass beads and two tobacco pipe-heads. It is interesting that one of the latter bears on it the same stamp or mark (a five-pointed

star) as a similar pipe-head found among the ruins of Castle Campbell, near Dollar. Were they probably made by the same pipe-makers? A communion token was found amongst the almost entirely obliterated foundations of what apparently had been a dwelling. Made as usual of lead, it has become considerably oxidised. It bears on the obverse the letter L. and on the reverse (fig. 1) the initials A H in the form of a double or reversible monogram—being those of Alexander Henderson, the famous Scottish ecclesiastical leader, who was minister of Leuchars for twenty-four years, viz., from 1614 to 1638. This token is believed to be unique, no other specimen, so far as I have been able to learn, being known to collectors. I was able to identify it by means of a seal attached to an autograph letter of Henderson, addressed to the Countess of Mar, dated from Leuchars, 26th June 1631. The seal is exactly the size of the token, and bears the same monogram.



Fig. 1. Token of Leuchars. (1.)

In the seventeenth and eighteenth centuries the inhabitants of Tents Moor did not bear a very good character, many of them being notorious smugglers and wreckers. An old tradition alleges that they were the descendants of Danes who were shipwrecked upon this part of the coast, but the writer of the first Statistical Account of the parish (the Rev. Thomas Kettle) says that he had been unable to find any authority for the statement. Sibbald in his *History* says—"Two miles eastward (from Earlshall), unto the ocean, is a plain heath and full of marishes, with a few cottages scattered over them called Tents-muir, and inhabited by a very rustic sort of people," to which in the edition of 1803 this note is appended:—"It has been supposed that these people are the progeny of some shipwrecked Danes, or the remnant of a defeated army; but it is probable that the rusticity of their manners arose merely from their residence in a desolated wild, secluded from the intercourse and comforts of society." In one of Henderson's sermons which has been preserved, and which was preached in the church at Leuchars on the 15th July 1638, he

rebuked his parishioners for working on the Sabbath during his absence on national ecclesiastical business, "whilk ye were not wont to do," he says, as also with "running from the one end of the parochin to the other to see a dancing" on the same day. About this the editor of Henderson's sermons says, in a footnote,—"It is probable that the dancing took place near the coast, among the seafaring part of the population."—(*Sermons, Prayers, and Pulpit Addresses by Alexander Henderson*, 1638. Edinburgh, 1867, p. 363.)

List of Flint Arrow-heads, etc., from Tents Moor, Fife.

3 cards with flint arrow-heads, scrapers, etc.

1 parcel of flint flakes.

1 parcel of rough flint nodules.

1 hammer-stone with abraded ends.

3 parcels of shells—cockles, mussels, and whelks.

1 fragment of split bone.

1 parcel of fragments of coarse pottery.

2 clay pipe-heads (and one with similar stamp from Castle Campbell, for comparison).

3 glass beads (2 blue and 1 white).

1 card with whorl, 2 brass pins, communion token of Leuchars parish, and 6 coins (small).

These, with the exception of the pipe-heads, and the token, are now presented to the Museum.

III.

NOTE ON ANCIENT GRAVES AT BELHAVEN, EAST LOTHIAN.

By the Rev. ROBERT PAUL, F.S.A. Scot., Dollar.

While staying at Belhaven, near Dunbar, last summer, I examined an interesting series of stone cists there, of which I find there is no record in the Society's *Proceedings*. These were originally laid bare by a severe storm, accompanied by unusually high tides, in September 1891, and they are briefly referred to in the *History of the Berwickshire Naturalists' Club*, vol. xiii. p. 318.

They are situated on a low range of cliffs on the seashore, on the eastern side of Belhaven Bay, about a mile or so to the west of Dunbar. The perpendicular front of the cliff faces nearly due west, and at high tide the sea comes up to the very foot of it. Its total height from the top to high-water mark is about 12 feet. It is composed of a coarse brown clay and sand, several feet in thickness, under which there is a deep layer of sea-rolled gravel mixed with shells, exceedingly hard and closely compacted: the whole resting, again, upon narrow horizontal strata of red and white sandstone, intermixed. The surface is covered with finer and more newly drifted sand, with turf of coarse grass and bent. The cists are all of them in the shell-sand, at a uniform level of about 4 feet from the surface and 7 feet above high-water mark. They are almost at the exact distance of 6 feet from each other, and are not crowded together, as if they had been constructed hurriedly. Their uniformity and regularity, indeed, suggest that they resulted from some common calamity. The length of the cliff-face in which they appear is 30 yards, and in this space I counted nine separate cists. At one place towards the north a considerable part of the cliff has fallen, and there the regular succession of graves is interrupted, though originally, doubtless, it was maintained. Only one or two of them, however, are in even a partially perfect state, most of what remains being evidently only the eastern ends of the cists, but the situations of the others are distinctly indicated

by hollows in the shell-sand, in the case of some of these, portions of the slabs which composed them being still *in situ*. They were "long graves," lying due east and west, 14 inches broad by 10 inches deep.

The slabs of which they were composed are pieces of the adjacent freestone rock, which splits easily, and they have no dressing of any kind. In no case do the sides seem to have been formed of single slabs, the imperfections in those employed for this purpose being supplied by smaller pieces. The tops consist of narrow slabs laid across the side ones, and



Fig. 1. Exposed face of cliff, with cists in the shell-sand, at Belhaven Bay, Dunbar.

in none is there any single heavy cover. The bottom of each cist seems to have been formed of one thin slab. All the graves were empty, though fragments of bones appeared here and there. But protruding from the shell-sand at one place, where, according to the regular order, a cist should have been, I found two portions of some bones—a *radius* and an *ulna*. These I succeeded in excavating, with considerable difficulty, however, owing to the hard and compacted nature of the soil. So far as I could discover, there were, curiously enough, no traces beside *these* of any slabs of stone forming a cist or grave.

The accompanying small photograph (fig. 1) furnishes a fairly good

idea of part of this ancient cemetery, the chief features of which I have tried briefly to describe. The situation of some of the cists which have quite disappeared, owing to the effects of the weather and the sea, may be noticed in the photograph, on either side of those which still remain in a more perfect condition.

Local tradition asserts that the graves are those of shipwrecked vikings. They belong probably to an early Christian period.

IV.

NOTES ON THE HOLYROOD "FOIR-YET" OF JAMES IV.

By JOHN SINCLAIR, F.S.A. Scot.

Of the thousand and one times royal Holyrood has been the subject of writers, the most learned as well as the most shallow and diffuse, it is remarkable that the fact is almost ignored that a small offshoot (the "Foir-Yet") of the first palace of the ill-fated hero of Flodden field still stands where it reared its embattled walls on that 7th day of August 1503 when he led the youthful Margaret Tudor through its portals to the palace which he had built for her as his bride and queen.

The entrance to the Holyrood of to-day faces James Fifth's towers on the north-west flank of the Palace; and were these old towers cleared away and the space running due east opened up, it would be found that David had set down his Abbey of the Holy Cross pretty near the centre of "the hollow between two hills," viz., between the slopes of Calton Hill and Salisbury Crags, and it would be at once seen also that the great western doorway of the Abbey faced the approach of the Canons of St Augustine as they marched down from their first residence in "the Castle of the Maidens," passing through the way of the Canons, now and ever known as the Canongate.

It is pretty clear that at that period there was no thought of a royal palace, or of buildings throwing the Abbey out of its clear issue to the

Castle, where the Canons lodged till about 1176. Whether this tardiness in occupying the new Abbey resulted from a delayed completion or from a dread of the marshy surroundings is not known, but most probably both considerations had weight in the sacred building only being used for high festivals, etc. up till the last quarter of the twelfth century. The grand edifice of the good David being then in full use, it is reasonable to believe that as early as this period some kind of "foir-werk" or gateway would be in use.

Father Hay tells us that the marshes around Holyrood were drained by Abbot Helias,[1] who surrounded the cemetery with a brick wall, about the middle of the thirteenth century. And again, William, who was abbot in 1152, and is mentioned as a frequent witness to charters during the reigns of Malcolm IV. and William the Lion, surrounded the Abbey with a strong wall of squared stone to secure it against predatory assaults.[2] This, of course, leads to no other conclusion than the very apparent one, that lodge and gateway barred the entrance to the sacred precincts.

During the reign of the first three Jameses we find no signs of any structural changes in Holyrood, the more singular from the fact of its being a chief home of the first James, the birthplace of the second, and a favourite abode of the third; but what manner of "foir-werk" previous to James Fourth formed the entrance to the Abbey and dwellings of the Canons and the Stuarts we can only surmise, yet may confidently maintain that the site is unchanged.

In Mylne's[3] "Master Masons" we find that in 1496 Sir Thomas Smyth, priest, was Master of Works within the Castle of Stirling, and that Walter and John Merlioun were masons under his direction. But five years after, we find Walter Merlioun at Holyrood under the famous Leonard Logy, taking part in the erection of the first palace of James

[1] Father Hay, *Lib. Sanct. Cruc.*, Pref. xx.

[2] Bellenden, the translator of Boece, speaks of the "vail that lyis to-ist fra the said Castell, quhare now lys the Cannogate, and which in King David's time was part of "ane gret forest full of hartis, hyndis, toddis, and sicilke manner of beisties."—*History of Holyrood*, p. 4.

[3] *Proceedings*, vol. xxx. p. 50.

Fourth. In the second volume of the Lord High Treasurer's accounts the editor writes:—"It is in 1501 that we first find mention of work there being begun under the superintendence of Mr Leonard Logy. Mr Leonard Logy proved an energetic and efficient Master of Works, and in 1501 a sum of £40 was granted him 'for his gude and thankfull service done and to be done to the King's hienes, and speciallie for his diligent and grete laboure made by him in the bigging of the palace beside the Abbey of the Holy Croce." Then follow in the accounts of the same volume:—"Item [the xx. day of October] to Walter Merlioun, mason, in part payment of his task of the foir-werk and the new hall (chapel) in Halyrudhous, xi li" (and eight similar entries).

This is quite conclusive evidence that Leonard Logy was Master of Works, superintending the construction of this first palace, and Walter Merlioun builder of the foir-werk, as well as the new hall.

The first map, of 1544, shows us unmistakably the foir-yet of James IV., but it also shows, clear and distinct, James Fifth's towers, joined by a wall from the left of the foir-yet, where it stopped, thus forming the north wall of Palace Yard, then began again at the north-east corner of the towers, cutting off and enclosing the Abbey, entry to which apparently can only have been from the Palace front, as now. In Hollar's View, which is next, the arrangement is quite the same, nor is there sight of the two buildings alleged to be historical, viz., the so-called Regent Moray's House (which I hold to have been Lord Robert's), which clung to the north side of James Fifth's towers, and further north-east the Croft-an-righ house, also named after Lord James. But in the next and famous View of Gordon of Rothiemay, leading up to the Cromwell burning of 1650, we have a great transformation. We see that a second wall had been erected to the north of James Fifth's towers, forming a private approach from the north side of the foir-werk, with entrance from the Canongate leading up to this (so-called) Regent Moray's abode, and entirely blocking up both the view of and the approach to the Abbey. This house was undoubtedly an after-erection, and probably had been attached by and for Lord Robert Stuart, who was Commendator of

Holyrood, with an entrance through the wall to the private stair of the Queen's rooms. In point of fact, indications on the wall still show where this entry may have been.

How James V. came to erect his towers almost in front of the grand old edifice of King David, and so cut off its free passage from its original line, can only be accounted for by the supposition that the sacred building at that time (1529–31) was, though it had been repaired by Abbot Crawford (who was abbot in 1457), reduced to the nave only; the great central tower gone: choir and transepts in semi-ruins; and the throes of the Reformation gathering in strength and influence: and that its uses as a religious house were less important, and the roadway leading from the foir-yet now obsolete, and mainly required for the palace-royal, which was henceforth to form entry to the remnant of the Abbey. One other hypothesis may, however, be advanced, that when James IV. founded the first Palace in 1503, he had planned to have but one entrance to both Palace and Abbey, as at the present day, but leaving the Abbey front clear of buildings. This conjecture finds support from Rothiemay's bird's-eye View, which shows a wide doorway in the north side of the quadrangle, and so opening towards the Abbey and grounds.

The foir-werk of the fourth James kept intact in its old position till the middle of the eighteenth century, when the archway and gates were removed, the south wall and tower being allowed to remain, the only remnants of the first palace of Holyrood, erected to receive a Tudor as the queen of a Stuart.

Premising, therefore, that the foir-werk as erected by Walter Merlioun, under guidance of Master Leonard Logy, the Master of Works at that time, and on the site of the entrance-porch of the Canons of St Augustine, was handed down to us intact, and up till the middle of the eighteenth century remained so, we have authentic views of the building both from its east and west approaches. The west approach, as represented by Skene of Rubislaw, shows a grim dead front, with high-pitched roof and storm windows to the north, and a gate apparently

reaching up two-thirds of the porch, with long hanging spikes reaching down from the top of the arch. Above this entrance there is what appears to be the royal arms, with a window on each side. To the right of this gate, forming the street, the whole of the old property as given in this View has been swept away, but on the left we have still the whole of the old buildings as there shown, including the pend leading into Thomson's Court, one of the finest bits of old Edinburgh now to the fore.

The east front to the Palace is of a more ornate character, being battlemented, with a tower on the south, which still stands. From the View by Brown, we see the pillars of the arches, the remains of which are still visible, but there is no trace of gate or spikes. This View brings us up to about the time of its demolition. Both Views show that the foir-vet only occupied the south half of the roadway, the north half, looking west, being apparently a dead wall, nearly half the height of the building; but the wall which fronted the Palace, joining the inner gateway, had a door into the Palace yard, connecting it with a door from the archway or port, and it was from this corner that the long wall, which remained till the Victorian improvements in the middle of last century, led up to James Fifth's towers. This, most probably, with another wall to the north, formed the enclosed roadway to the (so-called) Regent Moray's House, which we see in Rothiemay's Map.

Now, if the records of the Abbey Court are correct, this building, as seen in these Views, was used from the time of James VII. at latest as the legal office of the Sanctuary for Debtors (1686) The entries in the books of the bailie of the Sanctuary tell us that from that time up till 1880, when it was made obsolete by Dr Cameron's Act of Parliament, upwards of seven thousand persons found protection within its bounds. That means, that in its original form, as the foir-werk of James IV., it was used as the Court-house to issue "protections" for refugee debtors for about seventy years, viz., from 1686 till 1755, when it was demolished. And we have the further knowledge, that in 1646, forty years before, when the first Duke of Hamilton was created first Hereditary Keeper of

Holyrood, he was empowered to appoint the bailie and officers of the Sanctuary.

After the archway was cleared away[1] and the Abbey Court-house put into its present shape, it left behind, luckily, some visible portions of the

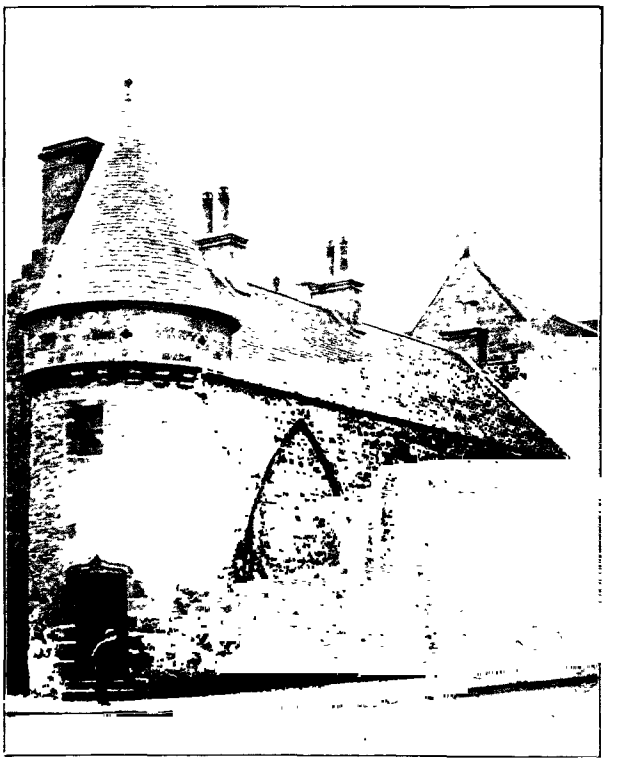


Fig. 1. Tower at south-east corner, and Wall with built-up Arches.
(From a photograph by C. W. Sinclair.)

original foir-werk, comprising the north wall of the south side (fig. 1), with its turret and with the remains of the arches. This wall, as at

[1] The keeper's house was over the gateways, and when demolished he was granted apartments in the Palace, but ultimately (in Queen Victoria's time) was shifted into what had been the soldiers' guard-house at the Palace gate, as now.

the present day, looking north, and forming one side of the roadway leading to the Palace, is clearly part of the original building in its entirety. There are the remains of four arches reaching to nearly the second storey of the building, with traces of the capitals and pillars on which they rested. These pillars, which rise about 8 feet, were fluted, with round-headed capitals. The span between each set where they rested on their pillars is 13 feet, and between each pair of pillars fully 2 feet. The length of the building from east to west is 58½ feet till it reaches the corner of the tower, the outside round of which is 16 feet 5 inches. Near the western entrance, in the centre of the first arch, there is clear trace of a door, now built up with squared blocks, differing from the surrounding rubble, which, were it opened up, would lead into the old jail in the interior. In the original there was a fine projecting pillared arch, which formed the front of the gateway towards the Palace, the whole of which has been demolished.

The tower at the south-east corner fronting the Palace, which originally was much higher than now, and had two windows (but now has one only), is also part of James Fourth's foir-werk. The whole building was much higher than now, having attics with storm windows; this accounts for the disappearance of the upper window of this tower. It is perfectly easy to trace where the top of the original had been replaced by modern dressed stonework, for the walls had been of coarse rubble, and now the one window has been adapted to light the stairway leading up to the large room now used as their Council Chamber by the High Constables of Holyrood House. The door of this tower or turret, which the Constables always use when marching out to take duty, faces the Palace and has a curiously pointed half archway over its flat top. In height it measures 6 feet 7 inches, and in breadth only 3 feet 3 inches.

The other doorway.—This door (shown to the left in fig. 2) was probably removed here from the wall adjoining James Fifth's towers during the Victorian improvements in the middle of last century, when the

Abbeyhill approach was carried through the Palace gardens. It is now attached by a wall to the back of the Abbey Court-house, and forms an entrance to its back yard. In height it measures 6 feet 10 inches, and in breadth 4 feet 2 inches, and shows some fine carved work, emblematic of

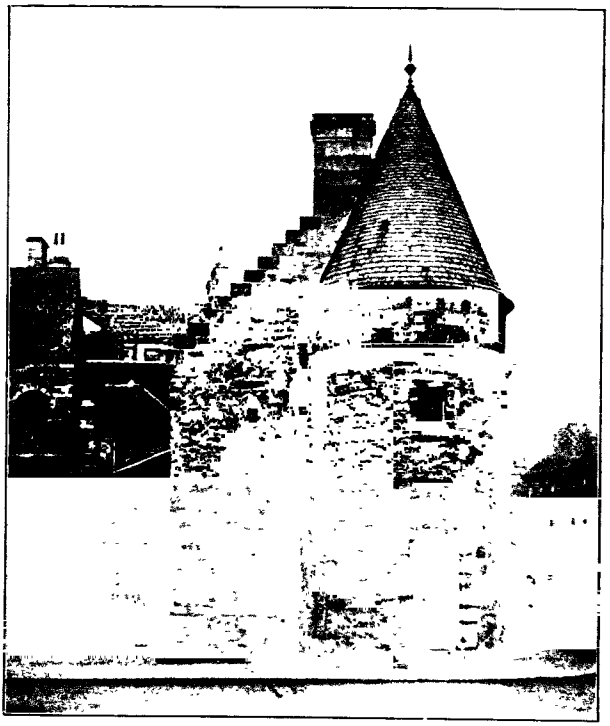


Fig. 2. The two Doorways. (From a photograph by C. W. Sinclair.)

the union of "the thistle and the rose." Over a scroll moulding on the left is the thistle, and on the extreme right is the rose: then comes a floral scroll of the entire breadth, and above this a large centrepiece of the royal arms, sorely decayed, and all bearing mark of much antiquity; while towering high above the whole design is a large thistle, which has either been picked out or is of a more recent date, the design being fully 4 feet in

height. The lintels, which are original, are 10 inches in width, finely fluted, and much decayed as well as chipped, possibly by removal. In this east gable of the foir-yet a doorway can be traced, and on the second floor what looks like the remains of a small iron-barred window: and it may be here noted that the sockets of the iron bars of James Fifth's towers are still quite distinct on all the windows.

There is little reason to doubt that this foir-werk, like the Palace proper and the Abbey of King David, had a share, however small, in the damage done by the English invasions of 1544 and 1547, not to speak of the mob violence of the Reformation tumults and the Revolution of 1688: but such ill-usage, so far as we can ascertain, must have been of no great account, probably extending only to doorways and ornamentation. Be that as it may, the remaining portions, viz., the north and east walls, tower, doors, arches and prison, are beyond dispute assignable to James IV.: and it is gratifying to know, that although the other two outlying portions of this royal residence were subjected to the humiliation of sale to private parties,[1] the old foir-werk has always remained in possession of the Crown. It is true that care and patronage of this historical treasure was bestowed on the first Duke of Hamilton, as Hereditary Keeper, in 1646, but as a property it did not pass out of the hands of the Crown: and now, after two and a half centuries, it has again reverted to the full possession of His Majesty's Board of Works, and let us hope that what remains of the old foir-werk may remain in good preservation for ages to come.

The Interior.—From the back wall view of the present erection it is quite evident that, with the exception of the east gable and the north front, with its remains of the archways, the whole is modern. One other exception, however, is worth consideration—the old prison on the street floor. An interior inspection of this Abbey Court-house leaves

[1] The Croft-an-righ house was repurchased by the Board of Works in the middle of last century from Hector Gavine, engraver. Queen Mary's Bath was bought back early in last century from the Veitch family, who are still the proprietors of the adjoining property.

no doubt of its reconstruction, on the removal in the middle of the eighteenth century of gateway and porch; but the old prison, which is built of dressed stone, with arched roof, and flagstoned, may have been found to have been built for all time, and under every occupancy requisite for use, and so incorporated with the new building. It is situated at the right-hand or west corner of the passage, and is of great strength and security. The floor space is 17 feet 4 inches lengthwise, and 12 feet 3 inches across, with fireplace in west gable. The side walls rise to 6 feet 6 inches to the spring of the barrel-shaped roof. The window facing the south, being part of the modern back wall, is of the usual dimensions, and, of course, iron-barred. The door of this quaint little prison is of great interest, and closely resembles the jail doors still to be seen at the top of James Fifth's towers. It is of great thickness, bolt-headed, and with the inevitable jailor's spy-hole, which is iron-barred, with sliding shutter, which can only be opened from the outside. As already noticed, there is evidence on the old outside wall of an entrance into this prison from the original archway: the present entrance, however, is from the passage in the interior of the building.

It should be here noted that overhead of this cell or prison there is another of a similar build, probably part of the last erection, entering from a stone gallery. That these prison cells were used up till nearly the time when the Sanctuary was swept away is perfectly certain. And that they were required when the refuge was in full occupation is also certain. If we take one year, 1816, we find the number of "Abbey lairds" or protected debtors to be 118, and this place of bondage was their place of punishment should they contract fresh debts during their refuge in Holyrood. This is the more easily understood when it is explained that the Court of Session had decided that any debtor who had gone to reside within the Abbey bounds had incurred bankruptcy, even though he had not been regularly "booked." In 1810 we find one Richard Perry Ogilvie, an English refugee, being incarcerated in this old prison for a debt incurred to Richard Townley, a Canongate draper.

The prisoner appealed to the Court of Session, but the Court confirmed the decision of the bailie of the Abbey.

Whether this Sanctuary for insolvent debtors, which was the only one existing in Scotland, derived its privileges from the well-known rights of ancient monasteries, has not been ascertained: but the editor of the *Liber Curt. Sanct. Crucis* is of opinion that this refuge, not being for criminals, as of old, was simply a privilege by usage attached to the royal residence. But it is pretty certain that from the time of the Canons of St Augustine, through the period of James Fourth and his royal palace, there was always a convenient place of incarceration for the refractory at the gateway: and it is quite safe to say that the present jail on the ground-floor of the Abbey Court-house is part of the old "foirwerk" of 1503, though it may have been remodelled in the reconstruction of the eighteenth century, at least in the matter of its entrance-door.

V.

NOTES ON A HOG-BACKED AND TWO COPED MONUMENTS IN THE GRAVEYARD OF NISBET, ROXBURGHSHIRE.

By A. O. CURLE, F.S.A. Scot.

The ancient graveyard of Nisbet is situated in the parish of Crailing, a short distance to the north of Nisbet railway station, on the left bank of the Teviot, and from three to four miles north of the town of Jedburgh. The earliest reference to a church or chapel on the spot is in a charter of the reign of David I., wherein the Earl Gospatrick granted to the Canons of Jedburgh the chapel of Nisbet. In the year

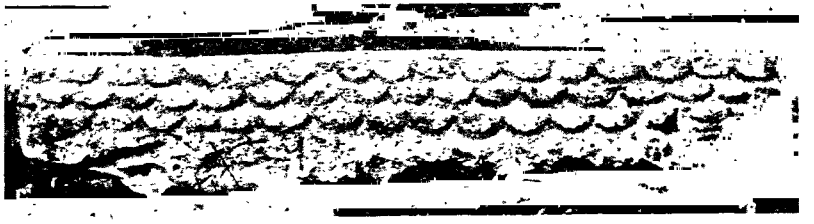


Fig. 1. Coped Grave-cover in Nisbet Churchyard.

1606 the parish of Nisbet was conjoined with the adjacent parish of Crailing, and from that date the church, gradually ceasing to be used as a place of worship, fell into disrepair, and has now so entirely disappeared that its actual site is a matter of conjecture. In the south-east corner of the graveyard will be found the three monuments which form the subject of these notes.

1. A large recumbent coped Stone (fig. 1), 5 feet 4 inches in length, apparently imperfect at either end, and tapered towards one extremity. The sloping sides, which are 7 and 8 inches respectively in breadth, are covered by three rows of well-defined scale-like ornamentation, much worn and rounded, and rest on a perpendicular base of 4 or 5 inches in height, which for a distance of 9 inches from the foot of the monument

has been gradually tapered so as to reduce the diameter from 17 to 9 inches. The flat ridge is 6 inches across. At the broader end there appears cut on it, in low relief, a cross, the three arms of which expand towards the edges of the stone—the upper arm terminating $4\frac{1}{2}$ inches from the centre and the side arms 3 inches. The expansion of the arms is from 2 inches at the points of intersection to 4 inches at the extremities. The outer edges are indented or notched, as in the Maltese cross—the



Fig. 2. Part of a Hog-backed Monument in Nisbet Churchyard.

cognisance of the Templars and Hospitallers. The shaft takes the place of the fourth arm and extends for 20 inches along the ridge. Thereafter the ornamentation consists of a diamond pattern, produced by a number of incised lines crossing the surface diagonally from either edge at a distance of from 5 to 8 inches apart. While the cross lines in this case are apparent only on the top of the stone, a hog-backed stone at Abercorn, illustrated in the 19th volume of the *Proceedings*, and described by Mr J. Russell Walker, shows several incised lines towards the higher end, drawn across the sides and top, intersecting each other on the ridge. Further, at the present time there may be seen on the Island of Iona a

modern dwelling, the roof of which, covered with shingles (which presumably are represented on these tombs by the scale enrichment), is crossed and recrossed with ropes to give it greater stability and keep the shingles in place. The stone lies east and west, with the broader end towards the east, and is believed to be in its original position. It was discovered when the churchyard was being levelled and put in order in 1890.

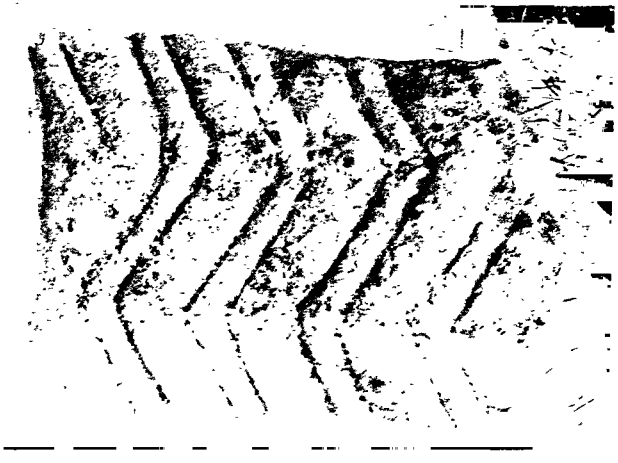


Fig. 3. Portion of a Hog-backed Monument in Nisbet Churchyard.

2. Standing at the east of the coped stone No. 1 is the greater part (fig. 2) of a hog-backed Monument of the usual type. It is 34 inches in length. In section it has a base of $8\frac{1}{2}$ inches at the perfect end and 12 inches at the point of fracture—the thickness at these two points being $5\frac{1}{4}$ and 11 inches respectively. The ridge varies from 4 to 5 inches in breadth, and has a rudely incised line cut along either edge Near where the stone is broken, two parallel lines cross the ridge at right angles. The sloping sides are not quite equal, measuring 6 and 7 inches in breadth respectively at the perfect end, and $11\frac{1}{2}$ and 12 inches at the fracture. Only on the broader side are there any remains

of ornamentation, and that consists of a number of small depressions or punch-marks. The stone is rather decayed on the surface and covered with lichen. Within the memory of man it has stood in its present position. Both these monuments are of white freestone.

3. Lying at the west end of stone No. 1 is a fragment of another coped Stone (fig. 3) of unusual character. It is of red sandstone, 15 inches in length, 10 inches in breadth across the base, and 7 inches in thickness. The flat top measures 5 inches across, and the sloping sides are 4 and 5 inches broad. These are ornamented with a series of incised parallel lines forming ridges, the edges of which are rounded alternately, of 1 and 2 inches in breadth, crossing the sides in opposite direction, and running diagonally across the flat top, thus producing the effect of a combined double chevron.

No one considering these monuments, who is familiar with the representations of houses and shrines in the Bayeux tapestry, can fail to notice the resemblance in many leading features. The roof ridge, rounded or flat, gives the form of the hog-back or the coped monument. The tiles or wooden shingles, either rounded or square, at the extremities are the scale-like enrichment. And following the same analogy, I venture to suggest that the chevron-like pattern on the stone at Nisbet may likewise be a conventionalised representation of a timber roof, such as is indicated on one house at least in the tapestry. From early pagan and Christian times, graves, the houses of the dead, have been covered with representations of the houses of the living, and we have apparently in these monuments the fashion of the houses, or at least of the roofs, of the Early Norman period. The desire for space on which to portray some symbol or inscription probably led to the broadening of the roof ridge, and from this gradually evolved the coped stone of mediæval and more modern times.

I must express my indebtedness to Mr Laidlaw, the enthusiastic custodian of Jedburgh Abbey, for having drawn my attention to these Stones; and to the Rev. C. J. Middleton, of Crailing parish, for much trouble on my behalf.

VI.

NOTES ON A ROMANO-BRITISH HOARD OF BRONZE VESSELS AND PERSONAL ORNAMENTS FOUND IN A MOSS ON LAMBERTON MOOR, BERWICKSHIRE, NOW EXHIBITED TO THE SOCIETY BY MRS MICHAEL COCHRANE, THROUGH REV. ROBERT PAUL, F.S.A. SCOT., DOLLAR. BY JOSEPH ANDERSON, ASSISTANT SECRETARY AND KEEPER OF THE MUSEUM.

The circumstances in which this interesting hoard was discovered and preserved are communicated by Rev. Robert Paul as follows:—"These bronze remains (22 pieces) were found in a moss on Lamberton Moor, Berwickshire, about sixty years ago by a labourer, John Geggie, residing in the village of Hutton, while digging drains. Geggie died quite recently, in his ninetieth year, leaving a niece, who lived with him—Mary Geggie, still residing in Hutton village, who gave the bronze pieces to their present owner, Mrs Michael Cochrane, resident in Dollar. She can give no more account of them than what is here stated, but says that she heard her uncle mention that when they were found they were wrapped up in some material which crumbled away when opened. She also states that her uncle had unfortunately given away some portion of the find—nearly half of it, she thinks—to a person from London."

As hoards of bronze articles of the Romano-British period are not at all common in Scotland, it is fortunate that this one can now be placed on record in a suitable manner, after the lapse of sixty years from the time of its discovery. It consists of portions of four Roman Pateræ, four Bowls of beaten bronze, a beaded Neck-ring, two small spiral Rings, two harp-shaped Fibulæ (enamelled), and an **S**-shaped Fibula in form of a sea-horse, also finely enamelled.

The four pateræ are represented chiefly by the thicker and stronger parts, such as handles, bottoms, and rims. They had been deposited one within the other, in a nest, as the marks of contact on the handles testify. Three of the handles are entire (fig. 1), and still attached to a portion of the rim of the vessel. They are all of the usual form of the

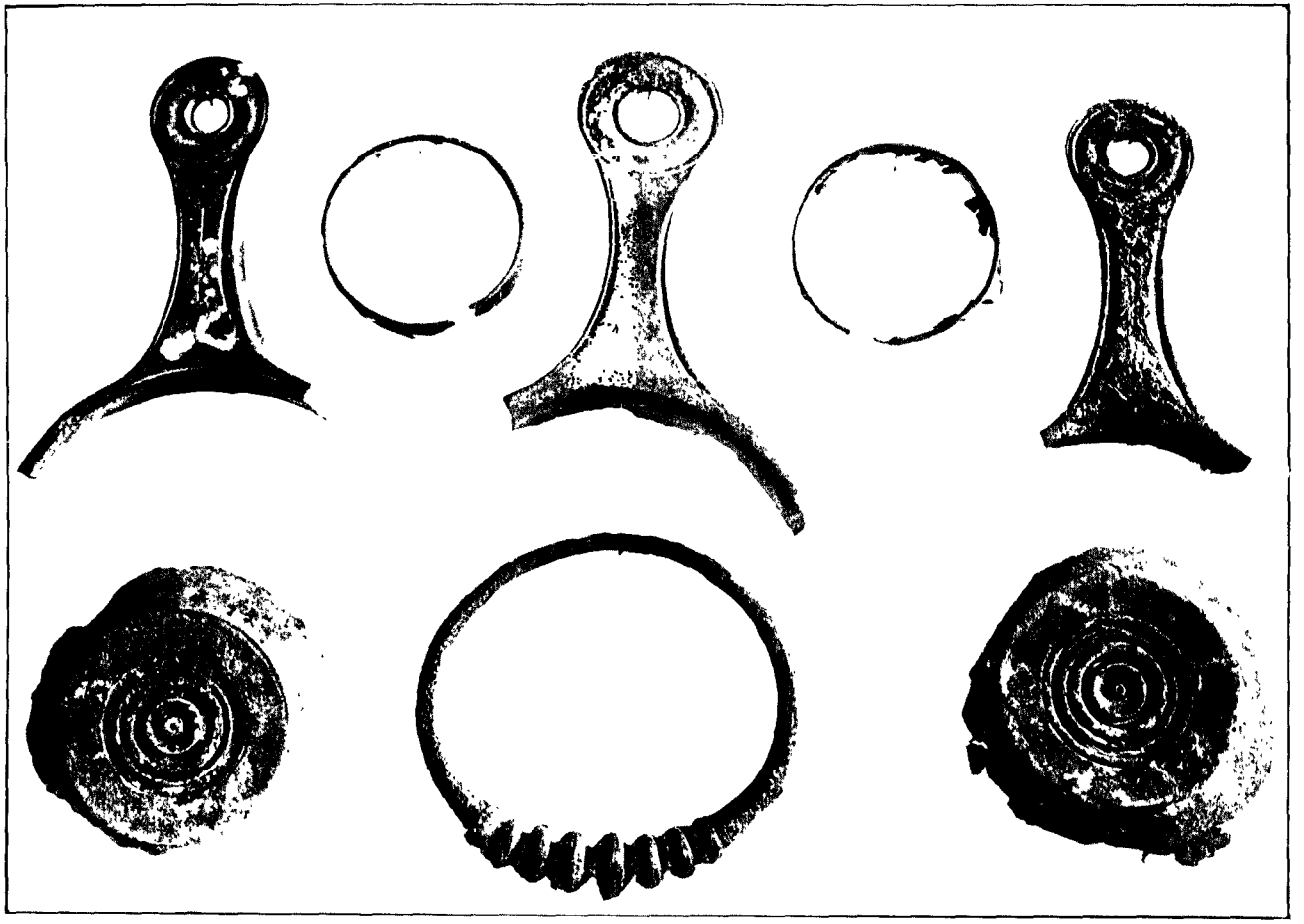


Fig. 1. Three Handles and two Bottoms of Bronze Pateræ, two Rims of smaller Bronze Bowls, and a Beaded Necklet of Bronze, found together on Lamberton Moor.

flat patera-handle, the sides curved inwards so as to make the width least about the middle of the length, and terminating in a circular expansion with a circular perforation in the centre. The largest measures $6\frac{3}{4}$ inches in length by $2\frac{3}{4}$ inches in its greatest and $1\frac{1}{8}$ in its least width. The second measures $6\frac{1}{2}$ inches in length by $2\frac{3}{8}$ in its greatest and $1\frac{1}{8}$ in its least width. The third measures $6\frac{1}{4}$ inches in length by $2\frac{5}{16}$ in its greatest and $1\frac{1}{16}$ in its least width. The fourth handle being only a fragment, its measurements cannot be obtained. The second has been enamelled on its upper surface, and the enamel has left its traces on the under side of the third, which had been lying upon it. The upper side of the handle of the third patera is ornamented by a chased device somewhat resembling a conventional thunderbolt. The bowls of the different vessels were, of course, slightly different in their sizes. Only one is entire for a portion of its width, and shows a depth from the rim to the bottom of $4\frac{1}{2}$ inches, the bottom being $3\frac{3}{4}$ inches in diameter inside, the diameter of another being 4 inches, and of a third, $3\frac{7}{8}$ inches. On the exterior of the flat bottoms there is the usual arrangement of three or four concentric circles, hollowed round the centre. Two of the vessels show clearly the tinning of the inside with an alloy of tin and lead.[1] On the inside of the other two there is no recognisable trace of tinning. Round the upper part of the exterior of the one which seems to be the largest, immediately under the rim, there is a band of chased ornament of a peculiar pattern, shown in fig. 2. The same ornament has been observed on two pateræ found in England, as noticed below.

Two pateræ found near Friar's Carse, in Dumfriesshire, in making the road from Dumfries to Sanquhar in 1790,[2] are of the same form as those from Lamberton Moor, and on the handle of the smaller of the two was the maker's name, ANSIEPHARR. One found on the farm of Palace, in

[1] The tinning of the patera found on the farm of Palace, Crailing, Roxburghshire, was analysed by Dr Stevenson Macadam, and found to be composed of tin and lead in nearly equal proportions. *Proc. Soc. Antiq. Scot.*, vol. iv. p. 601.

[2] *Archæologia*, vol. xi. p. 105.

the parish of Crailing, Roxburghshire, in 1849,[1] is in the Museum. One was found in the exploration of the crannog in Dowalton Loch,[2] Wigtownshire, in 1863, and is now in the Museum. It bears on its handle the name of the maker, P. CIPI. POLIBI. One was found at Stanhope, in Peeblesshire, in 1876,[3] along with a massive bronze armlet of Late-Celtic type, and is now in the Museum. One was found at Barochan, Renfrewshire,[4] in 1886: and two which are now lost are mentioned[5] as having been found at Gallowflat in 1773, and bearing the

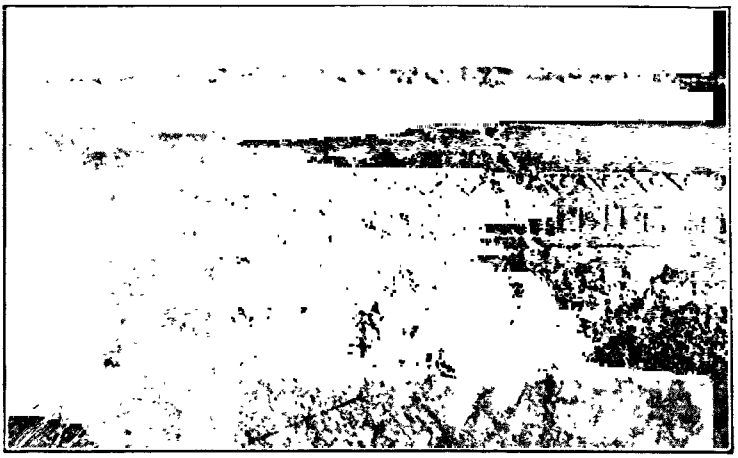


Fig. 2. Upper part of the side of Patera, showing the band of chased ornament

maker's name, CONVALLVS. One of smaller size, and more bowl-shaped, found at Longfaugh, Crichton, Midlothian, and a similar one found at Blackburn Mill, Cockburnspath, Berwickshire, are in the Museum. These, with the hoard found at Rubers law, and described by Mr Alexander Curle in the present volume, seem to exhaust the list of recorded finds of Roman paterae in Scotland.

[1] *Proc. Soc. Antiq. Scot.*, vol. iv. p. 398 and vol. xv. p. 323.
[2] *Ibid.*, vol. vi. p. 123. [3] *Ibid.*, vol. xv. p. 322.
[4] *Scottish National Memorials*, p. 19: and *Arch. Journ.*, vol. xlix. p. 225.
[5] Ure's *History of Rutherglen* (1793), p. 124.

Nor is the list of those found in England much more extensive. Three were found in a hoard,[1] along with a finely decorated helmet and other articles, at Ribchester in 1797. One found in 1838, at Prickwillow, in the Island of Ely,[2] has the same band of chased ornament round the exterior, under the rim, as has been noticed in the largest of those from Lamberton Moor: but its handle is highly decorated with enamel scrolls and dolphins in relief, and stamped with the maker's name, BODVOGENVS. F. A hoard of five was found in 1856 at Stittenham, in Yorkshire,[3] of which the largest had a band of the same chased ornament as that on the largest from Lamberton Moor, and two were stamped on the handles with the maker's name, P. CIPI. POLIBI, as in the case of the one from the Dowalton crannog. Two were found, with two colanders and other articles, about the year 1862, at Abergele, in Denbighshire.[4] Five were found in a hoard, with a bronze caldron and a number of bowls and basins of thin bronze, at Prestwick Carr,[5] in Northumberland, in 1890. One found at Herringfleet,[6] Suffolk, has the thunderbolt design on the handle and the maker's name, QVATTENVS: and another is mentioned as having been found during the excavations at Silchester.[7]

Besides the pateræ with flat bottoms and flat handles, there are in the Lamberton hoard four smaller vessels of thin bronze with globular bottoms. None of the rims of these vessels is quite complete, so that it is uncertain whether they have had handles or not. Three of them show a diameter of about $3\frac{1}{2}$ inches at the lip which is slightly everted, and in two cases thickened and flattened on the upper surface.

The fourth and largest (fig. 3) has a diameter of almost 4 inches at the lip, and is remarkable in having round the shoulder a band with a central row of bosses, each about $\frac{3}{16}$ of an inch in diameter and about the same in projection, placed about $\frac{1}{8}$ of an inch apart. This band, which is

[1] *Vetusta Monumenta*, vol. iv. p. 2.
[2] *Archæologia*, vol. xxviii. p. 436.
[3] *Ibid.* vol. xli. p. 326.
[4] *Trans. Hist. Soc. of Lancashire and Cheshire*, N.S., vol. ix. p. 20.
[5] *Archæologia Æliana*, vol. xv. p. 159.
[6] *Proc. Soc. Antiq. Lond.*, 1896, p. 239.
[7] *Archæologia* vol. lvii. p. 244.

about $\frac{7}{16}$ of an inch in width, is a strip of thin bronze carefully bent both ways to fit the curvature of the vessel, and the bosses are beaten up from the back. The band is not soldered or burnt on, but is tightly applied to the exterior of the vessel by small rivets having almost imperceptible heads on the outside, and larger heads beaten perfectly flat on the inside. Five of these rivets remain, at distances of about an inch and a half apart.

These vessels of thin beaten bronze, and specially the largest, with the implanted band of bosses in repoussé work, are more Late-Celtic than

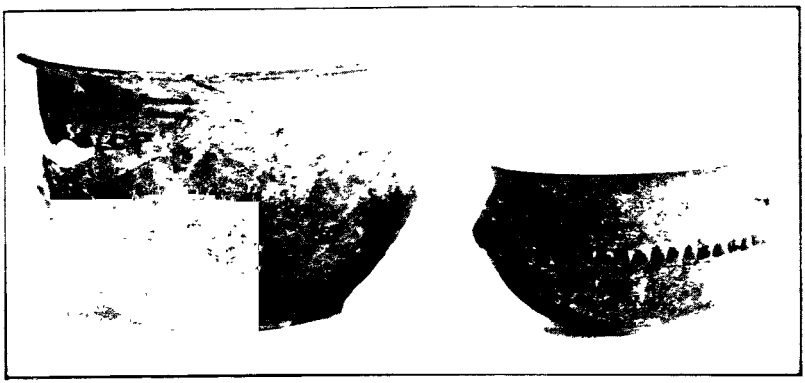


Fig. 3. Side of one of the Patera, and the Bowl with Bosses.

Roman in character. One of these small vessels of thin bronze, $4\frac{1}{2}$ inches in diameter, with a globular-shaped under part, and a strip with bosses at intervals riveted round the shoulder of the vessel, was found in the Glastonbury lake village,[1] which is assigned to a pre-Roman date, and has yielded a very large number of Late-Celtic remains.

The beaded collar or neck-ring (shown in fig. 1) is also distinctively Late-Celtic. It is of the usual form, slightly oval in contour, the internal measurements being 5 inches by $5\frac{3}{4}$ inches. Of the whole

[1] Bulleid's "Lake Village near Glastonbury," in the *Proceedings of the Somersetshire Archæological Society*, vol. xl. pp. 147, 149.

circumference, three-fourths is composed of a plain rod of solid bronze, almost circular in section at the centre of the back, where it is only about $\frac{1}{4}$ inch in diameter, thickening gradually towards the front, where it joins the beaded part. At the junction it is half an inch in diameter, ending on both sides with an ornamented part, covered in front with closely-set parallel lines of hatchings. The beaded part is separately formed of eight beads, graduated from about $\frac{3}{4}$ of an inch in diameter and $\frac{1}{4}$ of an inch in thickness to 1 inch in diameter and $\frac{1}{2}$ an inch in thickness. The larger beads are in the centre, and the whole are strung on an iron rod of oval section, bent to fit the shape of the collar, and entering socket-holes made for it in the ends of the bronze part of the ring. The beads are ornamented with bands of chased parallel lines on either side of the projecting moulding which passes round the middle of each bead, and between them are pulley-shaped connections, much oxidised, which may or may not be separate beads of smaller size.

Beaded collars of this form are rare in Scotland. One was found in Lochar Moss,[1] near Comlongan Castle, a few years before 1851. It has fourteen large beads, separated from each other by smaller pulley-shaped beads, all strung on an iron rod, the ends of which fit into sockets in the back part of the collar, which in this case is of considerable breadth and thickness, and bears Late-Celtic ornamental scrolls. Another was found in the crannog at Hyndford[2] in 1898. Only the beaded part was found, showing ten large beads separated by smaller pulley-shaped beads, and all strung tightly on an iron rod. These, with the one now described from Lamberton Moor, are all that have been recorded in Scotland.

In England, the type, though still rare, is not quite so scarce. One found in 1831 at Mowroad,[3] near Rochdale, has eleven beads, the back part of the ring rectangular in section and chased with double zigzag lines. One found at Embsay,[4] in the North Riding of Yorkshire, in 1844, has twelve beads, and the same form of ring. One found in

[1] *Archæologia*, vol. xxxiv. p. 83.
[2] *Proc. Soc. Antiq. Scot.*, vol. xxxiii. p. 385.
[3] *Archæologia*, vol. xxv. p. 595.
[4] *Ibid.*, vol. xxxi p. 517.

Carlisle in 1881 has ten beads.[1] One found at Perdeswell,[2] near Worcester, has twenty beads of very peculiar shape, alternating with pulley-shaped beads, strung on an iron rod

The two rings of bronze wire (fig 4), coiled in a spiral of two and a half twists, are made of roughly rounded wire, less than $\frac{1}{8}$ inch in thickness. One has a rude imitation of a serpent's head at one end of the wire: the other end is broken off. In the other ring both ends show a roughly broken surface. The interior diameter of the coiled ring is the same in both cases, about $\frac{15}{16}$ of an inch.

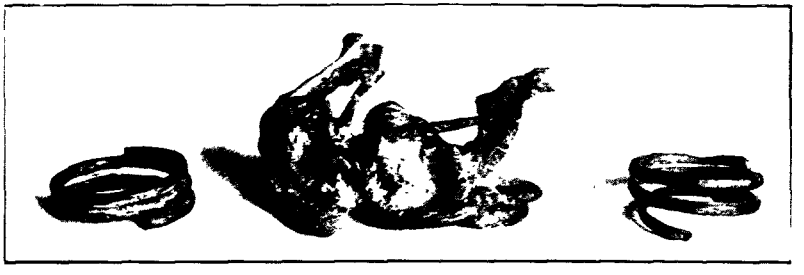


Fig. 4. Two Rings of Coiled Bronze Wire, and three Fibulæ cemented together in a mass of oxide.

Not the least interesting of the personal ornaments in this hoard is the group of three fibulæ cemented together by the oxidation of the metal. Two of them are of a not uncommon form, $2\frac{1}{4}$ inches in extreme length, bow-shaped, with a **T**-shaped head, the cross-bar covering the coil of the spring-pin: and the other end, which is finished off by a knob, has the triangular space under the end of the bow filled up with a thin plate, the under edge of which is curved upwards as a catch for the point of the pin. The coil consists of ten twists, and the loop, which is bent back upon the cross-bar of the head, is secured by a hook and stud, while a wire passing through the coil from side to side is bent over the whole, and, passing through a collar, forms a loop on the top of

[1] *Proc. Soc. Antiq. Lond.*, 1881, p. 534. [2] *Archæologia*, vol. xxx, p. 554.

the fibula. These two fibulæ no doubt formed a pair and were worn together, with a connecting chain from the two loops. Mr Arthur Evans[1] describes this form of fibula as a "specially British development," and says further that "these fibulæ were in fact worn by the native women in pairs connected by a chain hanging down between them." The patches of green, red, and yellow enamel with which

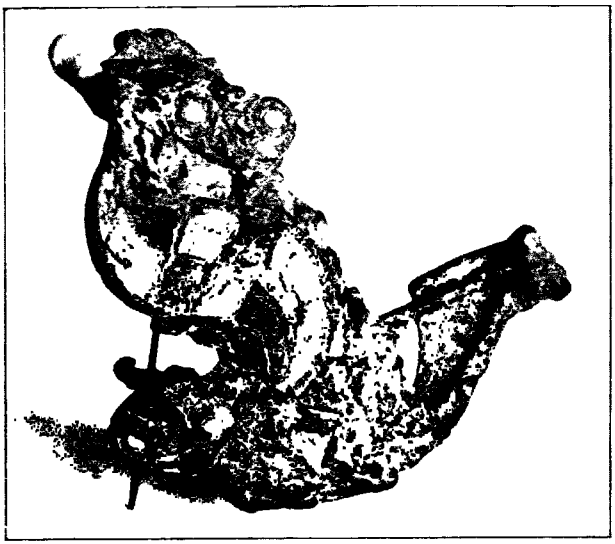


Fig. 5. Enamelled Fibula in shape of a Sea-horse, cemented by oxide to two other Fibulae.

the obverse face of the bow has been decorated are another Celtic characteristic.

The third fibula is the most remarkable object in the hoard. It is formed in the shape of a *hippocamp* or sea-horse, $2\frac{1}{2}$ inches in extreme length, formed of an **S**-shaped plate of metal, to the back of which have been attached the pin and its catch, now gone, while the front is

[1] "On two Fibulæ of Celtic Form from Æsica, Northumberland," by Arthur J. Evans. *Archæologia*, vol. lv. p. 183.

decorated with champlevé enamels. The nostril and eye of the beast are marked by circles of red enamel with blue centres. The crest and neck are hidden by oxidation. On the body, in the middle, are four lozenge-shaped spaces in which red and blue enamels alternate, while the curved portions are filled with two alternating panels of the same two colours. What ought to be the tail part is really a second head, with a nostril and eye filled in with red circles and blue centres as before. The upstanding crest is hidden by oxidation, an interesting result of which is shown in the perfect preservation of the forms and markings of four pinnules of the frond of a small fern and several spikes of grass, on which the fibula must have been lying.

This is the only example of these S-shaped enamelled brooches which has been found in Scotland. They are much commoner in England, and examples have been figured from Kirkby-Thore in Westmoreland, and Malton in Yorkshire, in the *Memoirs* of the York meeting of the Archæological Institute (1846); from Norton in the East Riding of Yorkshire, and another locality unascertained, in Mr J. Romilly Allen's *Celtic Art*; from the Thirsk House Cave in Derbyshire, in *The Reliquary* (1897); and from the Victoria Cave at Settle, in Professor Boyd-Dawkins's *Cave Hunting*.

MONDAY, *8th May* 1905.

THE RIGHT HON. SIR HERBERT MAXWELL, BART., M.P., LL.D., President, in the Chair.

A Ballot having been taken, the following were duly elected Fellows:—

FRANCIS BURGESS, 27 Lechmere Road, Willesden Green, London.
Rev. G. F. BURR, of Highfields Park, Halesowen, Worcestershire.
ROBERT DOLLAR, San Francisco, U.S.A.
WILLIAM HARVEY, 4 Gowrie Street, Dundee.
WILLIAM NEISH, of The Laws, Kingennie.

The following Donations to the Museum and Library were laid on the table, and thanks voted to the Donors:—

(1) By JOSEPH DOWNES, Irvine, Ayrshire.

Collection of Flint Implements, from the Sands of Shewalton, comprising one Arrow-head, with barbs and stem; three Scrapers; one small hollow Scraper; two Knives, with curvilinear edges; one chisel-like Implement; two small Borers; five minute Flint Implements; and one small circular Scraper.

(2) By the TRUSTEES OF THE BRITISH MUSEUM.

Catalogue of the Treasure of the Oxus. 4to. 1905

(3) By the KEEPER OF THE RECORDS OF SCOTLAND.

Calendar of the State Papers relating to Scotland and Mary Queen of Scots—1547–1603. Vol. iv. 1571–74.

(4) By the MASTER OF THE ROLLS.

Letters and Papers—Foreign and Domestic. Henry VIII. Vol. XIX., Part 2. 1544

(5) By G. Watson, the Author.

The Story of Maiden Lilliard. Is it a Myth? Reprint from the *Proceedings of the Hawick Archæological Society.*

(6) By Lieut.-Col. H. W. L. Hime, the Author.

Our Earliest Cannon, 1314–46. Reprint from the *Proceedings of the Royal Artillery Institution.* 8vo, pp. 6.

(7) By John Edwards, F.S.A. Scot., the Author.

The Gilbertines in Scotland. Reprint from the *Proceedings of the Glasgow Archæological Society.*

(8) By Edouard Piette, the Author.

Classification des Sediments formés dans les Cavernes pendant l'Age du Renne. 8vo, pp. 48.

Les Causes des Grandes Extensions Glaciaires aux temps Pleistocènes. 8vo, pp. 10.

Notions Complémentaires sur L'Asylien. 8vo, pp. 13.

Gravure du Mas d'Azil, et Statuettes de Menton. 8vo, pp. 13.

La Collection Piette au Musée de Saint Germain, par Salomon Reinach. 8vo, pp. 3.

There were exhibited:—

By Mr Macphee, Helensburgh, through Mr John Bruce, F.S.A. Scot.

Highland Brooch of Silver, with foliageous scroll ornament, and a Flanged Axe of Bronze, found at Fort-William, Inverness-shire.

The following Communications were read:—

I.

OBSERVATIONS UPON SOME SCOTTISH PLACE-NAMES AS THEY APPEAR IN THE ACCOUNTS OF THE HOLY LAND TAX COLLECTED BY BOYAMUND IN THE YEARS 1274–1276, AS PRESERVED IN A MS. IN THE VATICAN.

By The Right Rev. JOHN DOWDEN, D.D., LL.D., F.S.A. Scot.

Those who examine the Papal records relating to Scotland, as printed in Theiner's *Monumenta*, or (in some cases) as given in abstract in the *Calendar of Papal Registers*, of which six volumes have now appeared, must be struck by the strange and sometimes grotesque transformations which Scottish place-names have undergone at the hands of the Papal scribes. But the phenomenon is not such as to cause any surprise. The clerks of the Roman Curia, when they had to engage in the task of transcribing documents coming from foreign lands, could without difficulty read the Latin text so long as the sense was a constant guide to the interpretation of the script. It was different when they met a proper name, be it of person or place. Then, more particularly in the case of obscure place-names, there was nothing but to attempt to decipher letter by letter. Our own every-day experience with our ordinary correspondence shows us that while the general drift of a badly written, or of a fairly well written letter may be gathered quite accurately, the names of unknown places are not easily read, and sometimes give rise to a good deal of conjecture as to what was intended. If we show the doubtful word to different persons, we are often furnished with a variety of different interpretations of the written cryptogram.

Dr J. Maitland Thomson has lately procured photographs of two pages of the Vatican MS. of Boyamund, and allowed me to examine them. It is plain that some few of the variants in the spelling of the place-names in Theiner's *Monumenta* are due to errors of transcription for which Theiner himself is responsible. But, if we may judge from the two pages photographed, the great majority of the strange forms of the place-names in Theiner's print are faithfully reproduced from the MS.

A careful examination of the forms of Scottish place-names, as presented in the Papal records, reveals the *sources* of many of the transmuted forms. In medieval script certain letters bear a close resemblance to one another, and may be easily mistaken. Again, certain groups of letters give rise to a variety of possible readings. Each of these sources of error may with advantage be separately considered.

I. *The confusion of* c *and* t. The close resemblance of these two letters in medieval script is perhaps the most frequent of the sources of variation in the spelling of the Roman copyists. Where there is nothing in the sense of the passage to indicate which is obviously the true reading, even an accomplished charter-scholar may be sometimes perplexed as to which letter is intended by the written symbol. It is fortunately an error which seldom affects the identification of the place. A few examples may be taken from the Accounts of Boyamund's collection of tenths in Scotland in the years 1274 and 1275, as printed in Theiner's *Monumenta* (pp. 109–116).

(a) Cases where *t* is printed, and *c* had probably been written. Abertorn, Aldtambus, Ertledon, Cotpen, Buthan (the district, earldom, and rural deanery in Aberdeenshire), Gerloth (Gerloch, Gairloch), Sanctus Calmoth (Calmoch, Colmoc) Lostrist (Loscris:), and scores of similar cases could be added. (b) Cases where *c* is printed, and *t* had probably been written. Abernychi, Bochans (Bothans, St Bothans), Guchery (in the diocese of Brechin), Maricon (in the same diocese), Perch (the ancient capital of Scotland), Rocheven (Rotheven, Ruthven), Aberbrochoc (Aberbrothoc), Solcre, Lincon (in Haddingtonshire), Hereyec (Hereyet, Heriot), and many other cases which cause little difficulty might readily be subjoined.

II. A more perplexing source of error is the confusion of letters consisting of simple down-strokes, more especially when they occur in groups. There is often nothing in the manuscripts of the later medieval period to determine whether two down-strokes placed together signify *n* or *u*. I say the later medieval period, for generally in the twelfth and early part of the thirteenth century the writing is beautifully distinct. Errors

arising from this confusion are very frequent: but in the simple case just mentioned they seldom occasion any difficulty as to identification. Thus we have Kelco*n* (Kelcou, Kelso), Le*u*ingeston (Leuingeston, Levingeston), Tra*u*ernent (Tra*u*ernent, Traverneut, Tranent), Kylgoneryn (Kilgoueryn, Kingoueryn in *Regist. Vetus de Aberbrothoc*, p. 236). But difficulties are often presented when three or more down-strokes follow in succession. The possibilities of various readings are rapidly increased. Thus what is written *m* may signify *iu*, or *ni*, or *ui*, or *iu*, as well as *m*. A good example of such error, combined with the error of reading *t* instead of *c*, will be found in the shape taken (in the Accounts of Boyamund) by a well-known district in Aberdeenshire. "Garmath" is at first sight a puzzling word: but it yields readily on examination. The *m* should have been read *ui*, and the *t* should have been read *c*. "Garmath" thus becomes "Garuiach," the familiar form in early Scottish record of the name of the district now known as the Garioch. Again, an Aberdeenshire parish appears as "Damoth." The *m* is really *ui*, and we get "Dauioth" (Daviot).

When four down-strokes occur in succession several new possibilities of reading are open. Thus "Dim" is doubtless "Dun" (in Angus); and Diminaght is Duninaght (Duninach, or Duneynach, of the taxation of the diocese of St Andrews recorded in the *Registrum Prioratus S. Andree*, 34) "Limdy" is Lundy in Fife; "Glemlif" is Glenilif, in the diocese of Brechin; "Limtrechyn" is Luntrethin (Lumtrethyn in *Regist. Priorat. S. Andree*, 36) in Angus. The word given (at p. 114, col. 2) as "Bemmi" is puzzling. The true reading I take to be Benum, a valuable parish in the Mearns.[1]

III. (a) *Cases where* K *and* R *are confused.* The places named as Reth Undeby and Reth Maresca1 should be Keth Undeby and Keth Maresca1, both in the deanery of Haddington. In one place (p. 113) we find Rech Maresca1; here there is the additional confusion arising from the substitution of *c* for *t*. "Rarale" (p. 110, col. 1) is, I think, Karale (Crail), inserted in the Lothian list because Crail was appropriated to

[1] In *Regist. Priorat. S. Andree*, 37, it is spelled Bennum.

the Convent of Haddington: but this conjecture is offered with hesitation

(b.) *Confusion of* B *and* K. "Bechimdeby" is a strange-looking word. It is really one of the places just mentioned, Keth Undeby. The *B* is an error for *K*; the *c* for *t*: and the four down-strokes, printed as *im.* are really *un.*

(c.) S *and* F, s *and* f *confused.* "Syntref," in the deanery of Garioch, is Fyntref (Fintray). In the *Registrum Episcopatus Aberdonenis* (i. 43: ii. 55) we find the forms Fyntreff and Fyntre. Again, the confusion being now the other way, "Flemanan" is Slemanan (Slamannan). Again, the small s and f are sometimes confused. Thus Culfamuel must be Culsamuel, and Kinkraf, Kinras (Kinross).

(d.) Occasionally *b* is read for what was meant for *h.* Coldingebam and Morbam may be taken as examples. In "Smalberme" (110, col. 1), beside the mistake of *b* for *h*, *a* was mistaken for *er.*

(e.) "Sf" at the beginning of a word seems to be "ff," as "Sfongu" (*n* for *u*), Ffougu, (Foggo), in the Merse.

(f.) G *and* T. "Gravernenthe," in the deanery of Haddington, must be Travernenth (Tranent). "Gobernor," in the diocese of Dunkeld, is Tobermore.

Some cases of difficulty.—(1) "Simerkechin." In Boyamund's Accounts we find (p. 114) a place in the diocese of St Andrews, and in the archdeaconry of St Andrews (that is, in the part of the diocese north of the water of Forth), the name of which place, as given in print, is "Simerkechin." This name, which is certainly rather puzzling at first sight, will on a careful examination of the record be found to be the familiar Inverkeithing. There are some particulars as to the payment of the tax and the amount paid that point in this direction. This being so, we have only to examine the word "Simerkechin," and see whether it will yield its secret when examined with the light we now possess. It is obvious that the *c* may be read *t*: similarly the four down-strokes, which Theiner has printed as *im*, can be resolved into *un* or *nu*. This much gives us all but one letter. We have reached as possible,

"nuerkethin." We infer, then, that the letter printed as S must be read as I.

Similarly, I think, "Sunersunan" must be read "Inverlunan" (p. 114, col. 1). "Suner" easily gives "Inner," and we must read *l* for *s*. A long *s* (a long stroke rising above the majority of the letters but not coming below the base-line) might be easily mistaken for *l*.

We have seen that the resemblance in script of *S* and *F* has given rise to confusion. This same place, Inverkeithing, appears in another place in print (p. 114, col. 2) as "Funerkethyn." The four down-strokes, which were taken to be *im* in the word "Simerkechin," are here given as *un*. But they are, I think, beyond question *nu*: while the letter printed F is really I. A reference to any work on Palæography shows how very closely some forms of capital *I* resemble some forms of capital *F*.

(2) "Ginpyr." This place is also in the archdeaconry of St Andrews. There are several instances in the record in which C and G are confused. I will not say that in all cases this confusion is due to erroneous copying. Spelling at this time and for some hundreds of years later was largely phonetic, and it may be that in some cases the original Scottish scribe wrote the C or the G which we in our day should call wrong. "Ecclesia sancti Guthberti sub Castro" is of course St Cuthbert's, Edinburgh: but the *sounds* of Guthbert and Cuthbert are not very unlike. "Greenlaw" and "Creenlaw" are not very unlike in sound, and what we call Greenlaw (in Berwickshire) appears on one occasion in the Accounts as Crenlan (the final *n* being doubtless, in the original, *u*).

"Graniston" (p. 110, col. 1), in the archdeaconry of Lothian, appears to be Craniston (Cranston). Glammis in Forfarshire appears in the second year's accounts (p. 114) as Clammes, while in the first year's accounts it appears as Glamnes (p. 110). Crathie in Aberdeenshire appears as Grethi (in the *Regist. Episc. Aberdon.*, ii. 55, it is Crethy). It is plain that the G of "Ginpyr" may be a C. Now in the first year's accounts, Cupar (*ecclesia de Cupro*) paid 22 shillings and 8 pence, and in the second year "Ginpyr" paid twice 11 shillings and 4 pence. Hence I

take it that "Ginpyr" should be perhaps read "Cuipyr," though one hesitates to say how the three down-strokes should be divided.

(3) "Oysard," "Oernesy," "Oimbulger," "Oimenath," "Ommianyn" One is led to conjecture that the accounts for the second year of Boyamund's collection of the tax (so far as the archdeaconry of St Andrews was concerned) were written in a particularly illegible hand. For it is here (p. 114) that the strangest perversions of place-names occur. The scribe had his own peculiarities, as every scribe has; and some of these we can gather from an examination of the printed document. His capital *D* must have taken a form which resembled capital *O*; and we are well aware that one of the forms of *O* in medieval script is singularly like one of the forms of *D*. When this fact is recognised there is no difficulty in interpreting such rather alarming names of churches in St Andrews, north of the Forth, as Oysard (Dysard, Dysart) and Oernesy (the *n* being an example of the common error for *u*; and the whole word being Deruesy, Dervesy, Dairsie). Again, the curious name "Oimbulger" is, one cannot but suppose, a form of the name of the parish which appears in *Registrum Prioratus S. Andree* (34) as Dunbulg. Here the *O* is really *D*; and the four down-strokes should have been *un* and not *im*. Again, while in the first year's payments for St Andrews we have a tax paid by the united parishes of "Donethac et Quilt" (p. 110), in the second year it is from "Oimenath et Quilt." These are evidently the same places. Part of the word "Oimenath" yields fairly well. The *O* is *D*; and the *im* is, doubtless, *un*: the *t* before the *h* is probably *c*. But still the squaring the *u* in "Oimenath" with the *th* in "Donethac" has to be accounted for. "Duneynach" is the form in Scottish record: and the parish is the modern Denino in Fife. "Ommianyn" (p. 113), beside the *O* for *D*, presents us with seven down-strokes in succession; and the true reading I take to be Dunmanyn (*Reg. Priorat. S. Andree*, 29) in the deanery of Linlithgow. It is the parish now known as Dalmeny.

(4) "Gingondrum." This odd-looking name appears (p. 112, col. 2) among the parishes of the diocese of Brechin. The second *n* should, I

think, be taken as a *u*. The whole is then a phonetic spelling of the place now known as Kingoldrum. The dropping of the L sound is of course very common in Scottish phonetics. We are familiar with "goud" for "gold." In the family name "Halkett" the *l* is not sounded. We find in Boyamund's Accounts (p. 111), "Afford" for "Alford," and "Aveth" for "Alveth," both in Aberdeenshire. Chalmers (*Caledonia*, ii 351) says that Coldingham "is vulgarly pronounced *Cowdenham*." Compare also Halton, Almond, etc. This is a good example of how it sometimes brings us nearer to a solution to *sound* the word rather than to look at it. In the second year (p. 115, col. 2) the word appears as "Kyngoudru." The want of the final *m* in this latter case is perhaps due to the accidental omission of the bar or horizontal stroke over the *u*.[1]

(5) "Prior de Oustmot" (p. 114, col. 2). This is, beyond question, the Prior of Restennot. The two closing syllables are, I take it, "tinot." The *R*, being of the widely looped type, might be mistaken for *O*.[2] But speculation without sight of the script is of little value. For practicable purposes it is enough to know that no other word than "Rustinot" can be intended in the place where the word occurs.

(6) "Halaham" (in the deanery of Haddington, p. 113, col. 2). A comparison with the first year's payments suggests that this is Aldham, the second *a* being a mistake for *d*; the initial aspiration is not uncommon.

(7) "Cimbar" (p. 113, col. 2). Here we have "Cimbar et Pentheland" paying 7 lb. 13 sol. 4 den., evidently only for half the year. In the accounts for the previous year we find the Rector of "Dunbar and Pentland" paying 22 mks. (that is 14lb. 13s. 4d.). The C must be an error for D, and the four down-strokes should be read, not *im*, but *un*.

(8) "Forberwic" (p. 113, col. 2) must from the context be Northberwic.

(9) "Fercemoth" (p. 110, col. 1). This puzzling word is, as I conjec-

[1] The variants in the *Registrum Episcopatus Brechinensis* are Kyngoldrum, Kincoldrum, Kincaldrum, Kyncaldrum.

[2] At p. 110, col. 2, the form is "Rustinoth," and so in the Register of the Priory of St Andrews.

ture, what we now call Forteviot. The form of the word in *Regist. Priorat. S. Andree* (p. 34) is Fertheuieth. Examining carefully the word in Boyamund's Accounts we can see that *t* was mistaken for *c*, while the *m* is really *ui*. These changes give us "Ferteuioth," which in sound is scarcely different from "Fertheuieth."

After such attempts at explanation of the forms of place-names which yield to pretty well-known principles gained from experience in dealing with medieval hand-writing, there yet remain in Boyamund's Accounts a good many names whose forms may, perhaps, be best accounted for by supposing a very badly-written original, or a very careless transcription, or probably by both. There remain plenty of puzzles to stimulate the ingenuity of scholars.

There is no more valuable document in Theiner's large collection of papal documents relating to Scotland than Boyamund's Accounts (*Monumenta*, pp. 109–116), giving us, as it does, on the sworn evidence of the clergy, the revenues of the Church in the third quarter of the 13th century for a large part of Scotland. Unfortunately, the details for some of the dioceses (and among them the great diocese of Glasgow) are lacking. Still we have here a document of very great value; and it is in its present condition almost useless. It needs careful editing, with (if possible) a complete identification of the place-names. The work should be undertaken by some one familiar with the topography of Scotland, and familiar also with the older, commonly recognised, names of Scottish places. To such knowledge I cannot pretend; but there must be some among the members of this Society who could do the work and do it well. The object of this communication will be accomplished if I am so fortunate as to be able to induce some such competent enquirer to deal with Boyamund's Accounts.

Postscript.—It may be mentioned that the Council of the Society of Antiquaries has resolved to endeavour to procure photographs of the whole of Boyamund's Accounts from the Vatican Library. Already the two pages photographed for Dr Maitland Thomson have furnished some valuable results. Among others, it is now certain that a pen flourish

over the last syllable of words, which in the case of the word "Oimbulger" (discussed above) has supplied the final *er* in Theiner's transcript, is often non-significant.

II.

ADDITIONAL NOTE ON THE OCCURRENCE OF EARTHENWARE JARS OR JUGS BUILT INTO THE WALLS OF DWELLING-HOUSES IN SCOTLAND. By ALEXANDER HUTCHESON, F.S.A. Scot.

In a paper to the Society in 1883 (*Proc.*, xvii. pp. 426–32), I directed attention to two different buildings (since then removed) in Dundee, in each of which earthenware jugs had been found inserted in a peculiar manner in the external walls.



Figs. 1 and 2. Jugs found built into the wall of a house in Dundee. (5½ and 5 inches high.)

The jugs, several of which were preserved (figs. 1, 2), varied somewhat in form and dimension, but neither of these characteristics seemed essential to the original purpose, whatever that may have been, of their insertion in the walls, since we cannot but suppose that in such a case

a uniformity of design would have been displayed. On the contrary, that purpose had been apparently effectually served by the use of the ordinary household jugs of the period. The jars discovered in Dundee were all of the ordinary "jug" variety, having the common bent or bow handle on one side, and a spout or slight eversion of the lip at the opposite edge. The jugs were of a coarse dark reddish-brown glazed ware, of sixteenth or early seventeenth century. They had been inserted when the walls were being built, and were therefore at least coeval with the age of the house. They lay on their sides with their mouths flush with the external face of the wall; and as they were not filled up internally with plaster, they presented to the spectator a series of small circular orifices placed at a uniform level in the walls, and (with one or two exceptions) between the upper floor windows of a three-storey structure.

In considering the object for which the jugs had been so placed, it was, I think, evident that the spout and handle served no apparent purpose in the wall. For any evidence to the contrary, a vase without either handle or spout would have served the purpose quite as well.

We may, therefore, conclude that the custom was not widespread enough to call for the supply of a special form of jar, hence the use of the ordinary water jug of commerce. This, at all events, was the character of the jugs which came under my notice in Dundee in 1883.

Whether this was also the type of the jugs or jars used in such large numbers in the inside walls of the Wedderburn house, also noticed in the same paper, I cannot say, as unfortunately no particular notice seems to have been taken of them at the time, and when it came to my knowledge no definite information was obtainable.

I have mentioned that only two instances of the practice were brought under my notice in Dundee. Other examples were suggested by tradesmen and others whom I consulted, but a careful search in the localities indicated failed to locate any other instance.

Still, the fact that two different houses in 1883, presumably the residences of persons of means and estate in the 16th century, exempli-

fied the peculiarity, removed it out of the region of singularity, and raised a presumption of an established usage.

Since then I have, as occasion served, kept a sharp look-out for other examples, but it was not until the spring of last year that I was fortunate in discovering another example of this curious custom, for such we are now entitled to consider it.

On the 29th March 1904, I happened to be visiting my friend Mr Wm. W. Moncrieff of Annfield, Abernethy, when he mentioned the old mansion-house of Innernethy not far off, which he said was empty and getting into a ruinous condition, but well worthy of a visit.

Accordingly we started off, and I had not been many minutes at the old house, a building of three storeys in height, when my eye was caught by a small circular opening like the end of a drain-pipe, about 3 inches in diameter, situated in the top storey and midway between a window and one of the corners of the south gable. It immediately occurred to me that this might be a jar, an instance of the practice exemplified in Dundee, and if so there might be more of them. I moved round to the west side of the house, and to my delight saw that on this side several other examples presented themselves. I could now also determine the fact that they were indeed jugs like the Dundee examples, because one or two showed a spout, and at least one exhibited a handle. Careful examination of all the sides of the house showed that at least nine jugs had been placed in the walls. They were all at a uniform level of about 3 feet below the wall head and between the upper floor windows, but so placed that they could not have been easily reached from the windows.

The house of Innernethy is a plain rectangular structure, measuring about 60 feet long by 21 feet 6 inches wide over walls, three storeys in height, and having a gable at each end. The entrance door is placed about the centre of the east front, whence a passage leads directly across the ground floor giving access right and left to other portions of that floor and ending in a circular stone staircase which, projecting from the western wall, forms a sort of tower on that side and gives access to the upper floors. Internally the walls of the principal apartments had been

pannelled with wood, some fragments of which remained, but no date or armorial bearings could be anywhere discovered in the building. I should attribute its erection to somewhere about the end of the 17th century, a period less remote than the Dundee examples, which were certainly older than this. This would seem to indicate that the practice of placing jugs in the walls of dwelling-houses in Scotland prevailed at least for about 100 years.

Immediately on reaching home I wrote to Dr Joseph Anderson, making the discovery known to him, and proposing to furnish the Society with



Fig. 3. Six Jugs found built into the walls of the Mansion-house of Innernethy. (9¼ to 10½ inches in height.)

notes of an investigation of this new instance of a practice so singular. Unfortunately, a severe illness laid me up for some months, and the proposed investigation had to be postponed. Meanwhile, unknown to me, the walls of the old house had been broken into for materials for the repair of some farm building on the property, and in the course of taking down the jars had been uncovered, a circumstance noted in a paragraph in the *Dundee Advertiser* of 26th September 1904. Recognising the desirability of the utmost care being taken of the jugs, I wrote at once to Dr Anderson, requesting him with this view to communicate with Sir

Robert Moncrieffe, Bart., the owner of the property, and I was glad shortly thereafter to receive Dr Anderson's assurance that the jugs were being taken care of, and that Sir Robert had agreed to present a specimen jug to the National Museum.

Since then I have had the pleasure of inspecting and photographing six of the jugs in Moncrieffe House. I have not heard what has become of the other three, but a visit lately made to the old house showed that all the nine specimens I saw in March 1904 had been removed from the walls.

Of the six jugs preserved at Moncrieffe (fig. 3), five are of one pattern, although differing slightly in dimensions. These five range from $9\frac{1}{4}$ inches to $10\frac{1}{8}$ inches in height, $3\frac{3}{4}$ to $3\frac{5}{8}$ in diameter at the mouth, about 4 inches at the base, and from $\frac{3}{8}$ of an inch to $\frac{1}{2}$ inch in thickness.

All have handles, and are of a yellowish-green glazed ware with brown streaks. One is not glazed inside. One is filled up in the neck with lime mortar, but appears from the weight to be empty below. Three out of the six had remains of a bird's nest inside. Several of them have had handles and necks broken, doubtless from age and removal, as the breaks appear fresh, and in some cases the fragments have been preserved.

The jugs, like those in Dundee, do not appear to have served any other purpose, as evinced by the scoriæ adherent to the bottoms.

The handles have a double depression at the sides of the upper extremity and a single central depression at the lower end, as if from the impress of a thumb in the soft clay at their formation.

The sixth jug is of much more interest than the others (fig. 4). It is of smaller and more graceful shape, of a light-brown colour, highly glazed, and ornamented with raised decoration, and a band about $\frac{1}{2}$ an inch wide with an inscription round the widest part. At the neck is a bearded face; round the body is the band with an inscription as follows:

✣ WES : AEF : EST . VAR · IST : WER ✣

three times repeated: above and below the band are acanthus leaves (inverted below) and small circular medallions containing profile heads in relief. The letter S is inverted in the inscription.

In my former paper, in considering the origin of this strange custom which seems to have hitherto escaped notice, I suggested the jugs might have been inserted in the walls to serve as birds' nests. In point of fact, as already mentioned, three of the six jugs preserved at Moncrieffe contained portions of birds' nests, but the object of the builders in making such provision for birds seems far from clear. I formerly referred to a superstitious belief that the presence of birds' and especially swallows' nests insured the safety of a building from lightning.



Fig. 4. Inscribed Jug found built into the walls of the Mansion-house of Innernethy.

but is it certain, granted such a superstition prevailed in Scotland, which has not been proved, that swallows would have preferred such a form of nest to their usual "clay biggins" under the eaves?

It really seems as if we must wait for more light on the subject. Perhaps the additional publicity given by the present instance may lead to other like discoveries when old buildings are being removed.

I cannot but think, however, that the slight accident of my visit to

Innernethy in March 1904, when I pointed out the holes to the farmer, and explained to him what they would be found to be, led to the public notice given to the discovery of the jugs at the removal of the walls.

But for this the chances are that the jugs would have shared the fate of those which perished by hundreds—so it was said—when the Welderburn house was taken down in Dundee, no one of the many persons concerned thinking the matter worth a moment's consideration.

III.

NOTICE OF THE DISCOVERY OF STONE COFFINS AT AUCHTERHOUSE.

By ALEXANDER HUTCHESON, F.S.A. Scot., Broughty Ferry.

The recently erected Dundee Sanatorium for Consumptives, the munificent gift of Ex-Provost Moncur, occupies an elevated plateau on the south front of Auchterhouse Hill.

Here on 14th January 1903, while excavations were in progress, two stone coffins were discovered. The coffins were rudely formed of thin skelbs of undressed stone, such as are found on the hill, having from three to six stones in the length of each side, each end being closed by a single stone, while five and six slabs respectively formed the covers. The coffins had no other bottom than the rocky material of the hill. That farthest east lay at a depth of 15 inches from the surface. It was 15 inches wide at the head or western end, diminishing gradually to 9 inches at foot, and was about 9 inches in depth. In it lay the remains of a human skeleton, much decayed except the skull, which was in a good state of preservation and lay leaning to the right. The teeth were well preserved, the summits of the crowns exhibiting the natural rugous surfaces unworn.

No relics of burial were found in the other coffin, which lay ten yards farther to the west, and at a depth of 2 feet 3 inches from the surface, and measured only 9 inches in width throughout by 9 inches in depth.

The burials must be regarded as of the "full length" variety, and, as both were approximately orientated, presumably assignable to the Christian period.

There exists no record of there having been on the site any place of Christian burial. I had no opportunity at the time of the discovery to visit the site, but on doing so in the course of the succeeding summer, I made a discovery of local traditions still existing which may indicate an origin for the burials. To explain these it is necessary to revert to the condition of the site before the operations were commenced for the erection of the new hospital.

Here, then, and occupying a small knoll known locally as "Greenfield Knowe," towards the western end of the plateau already noticed, two upright standing stones of boulder character formed a conspicuous feature. They were, if tradition be accepted, the survivors of a larger group.[1] The same tradition records that the farmer of Greenfield farm, requiring stones for the erection of dykes, removed some of the standing stones from Greenfield Knowe. He, however, speedily found unexpected difficulty in carrying out his intentions. The dykers whom he had employed absolutely refused to use the stones, alleging they would thereby bring misfortune upon themselves and families, and threatened, rather than risk such calamities, to throw up the job.

While in this quandary the farmer, it is said, had a vision; a ghostly figure appeared to him, and in a hollow voice warned him against interference with the stones on Greenfield Knowe, and concluded by the adjuration, "Gang ower the howe t' anither knowe." Needless to say, the farmer lost no time in obeying his ghostly visitor. Next morning

[1] The writer of the account of the parish in the *The New Statistical Account of Scotland* says, "Near the bottom of the Hill of Skilla stands a Druidical Altar in a very entire state." This is expressed in the usual vague style of the period. It would have been more to the point, and might have helped to an identification with the Greenfield group, had the writer told us in what he reckoned the complete state of a Druidical Altar to consist. We are further informed that in other places of the parish stone coffins containing human bones have been disinterred in the prosecution of agricultural improvements.

he carted back the stones he had removed, and sought material for his dykes elsewhere. I am indebted to Mr John Bryson, builder, Auchterhouse (corroborated, however, by others) for this tradition. It is here given exactly as received from Mr Bryson, the only liberty taken with it being to translate into modern English Mr Bryson's expressive Doric—all but the concluding command of the ghost (who must have been a poet), too precious for translation, and therefore given in the original form.[1]

Whether there be any truth in the Greenfield story, and that the farmer had broken up some of the stones for ease of conveyance and subsequently carted back the fragments, the fact remains that only two stones of the alleged group stood upright on the knoll immediately previous to the operations which led to their removal and the discovery of the coffins. The stones stood some fifteen yards to the westward of the westmost of the two coffins. Unfortunately, in the operation no care was taken to retain the stones in their original position. Both were thrown down. One of them has been buried under the debris, so that its whereabouts is now unknown. The sole remaining stone has been shifted some twenty-five yards from its original position, and now marks the site originally occupied by the first-named coffin. This coffin, with its contents, has been removed, and under the care and supervision of Mr John Maclauchlan, curator of the Dundee Museum and Public Library, reconstructed, with skull and remaining bones, as nearly as possible in position, under a glass case in the Dudhope Museum, Dundee, where it forms an object of much interest—a praiseworthy and possibly as yet unique instance of an attempt to preserve for public instruction one of the early modes of interment in Scotland.

Furthermore, I learned from Mr Bryson that the group of stones, two or more, were locally known in his young days as "The Spittal Stanes." This is important, as perhaps casting a light on the interments.

[1] Variants of this story apply to many other districts in Scotland, and point to the universality of the superstitious reverence with which circles and groups of stones are popularly regarded.

The term "spittal" as a place-name in Scotland is generally regarded as a contracted form of "hospital," and if indeed a hospital, leper-house,[1] or other house of refuge stood here in mediæval times, it must surely be regarded as a singular coincidence, that while the old "spittal" survives only in a traditional term applied to the relics of a still older foundation, the designation should now receive a fresh stability from the dedication of the site to a sanatorium in modern times.

It is proper, in conclusion, to add, that to the Rev. W. Mason Inglis, M.A., F.S.A. Scot., Auchterhouse, is due in no small degree the attention which the discovery received, and which has led to the preservation of the remains.

[1] An apparently clear connection between the place-name "Spittale land" and the disease of leprosy is afforded by the following extract relating to a tack of lands at Dumbarton, anno 1494. "In presens of ye lordis auditouris Walter Watsone for him self his wyf & sone grantit to gif owr ye tak of ye landis of Spittale land to ye toun of Dunbertane quhat tyme yae wald get a discharge of ye lepir man of quham he haid ye said tak" (*Records of the Parl. of Scot.*, vol. i. 1804, p. 434).

IV.

ANTIQUITIES AND OLD CUSTOMS IN ST KILDA, COMPILED FROM NOTES MADE BY REV. NEIL MACKENZIE, MINISTER OF ST KILDA, 1829–43.

By Rev. J. B. MACKENZIE, F.S.A.Scot., Kenmore.

The name by which the island is known wherever Gaelic is spoken is 'Uirt,' sometimes used in the aspirated form of 'Huirt.' It is derived from 'I' (island) and 'ard' high. All the place-names are derived from modern Gaelic, so that it is probable that the more ancient inhabitants were exterminated by the Norwegians when they frequented the island. That they did so is, I think, almost certain. In clearing the glebe I removed a mound in a little field, and found in it a long and narrow whetstone, an iron sword, a spear-head, and various other pieces of iron, mostly of irregular shape, and the use of which was not obvious.

From their language, traditions and surnames, the present inhabitants came from the long island in comparatively recent times. The only linguistic differences are in the shade of meaning which they attach to a few words, and the way in which they pronounce words in which 'r' rough occurs and the sound they give to 'd' or 'g' in some combinations. The 'r' they uniformly pronounce like 'l' as in 'ruith' run, which they pronounce 'luith,' otherwise the tone and pronunciation are the same. At present the M'Donalds are the most numerous, and the other surnames are M'Leod, Gillies, Morristan, M'Queen, M'Kinnon and M'Crimmon.

There are in St Kilda proper two or three Keills, where there are the ruins of small churches, one of them dedicated to Mary, another of them to Brenan, while in Borrera and Soay there still remain altars of rough stones. In the Glen near the shore there is a sacred well called *tobar-nam-buaidh*, well of virtues. Further up the Glen is a round building of very coarse workmanship, roofed with stones overlapping one another till they terminate in a round hole which gives light to the building. It is called the Giantess' house, and is covered with grassy turf. At the head of the Glen, and near the top of 'Mullach Mor,' there is a small ruin called *tigh an fhir faireadh*, the watchman's house. It commands a view of every possible landing place.

Clach Aotaig. This is the name given to a semitransparent stone, which both here and in other parts of the Highlands is held in superstitious veneration. In many places it is called *clach buaidhean,* stone of virtues. To get this stone, boil the raven's eggs and return them to the nest, when by and by the raven will go and get a *clach aotaig* to try and cure them, when if you are lucky you may secure it.

Scattered about here and there, and very numerous, were green mounds called *cnocan sithichean*, which were looked upon as the abodes of the fairies. These were all removed in the course of agricultural improvements. They were composed of stones mixed with a little earth to a depth of two or three feet. At some distance below this layer were stone coffins formed in two different ways. At times they were formed of four flat stones set on edge and covered by a fifth. At other times both the sides and roof were formed of several stones set in the same way. These were seemingly of different age from the former. In a few of them bones were found, and in nearly all of them pieces of earthen vessels.

In clearing for agricultural purposes, a small park near the centre of the glebe and at the foot of *Aoismheal*, I came upon a flat stone a little under the surface. On the top of it were some ashes. On lifting it up I saw that there was a curiously built space underneath, but as it might be a relic of some ancient place of worship, I did not disturb it but replaced the stone. The stones removed were built into a thick wall around the little field, but there remained two stones which were too heavy to remove, and as they were lying flat and occupying a good deal of space, I raised them on end. They may puzzle some future antiquarian.

The north glen was the sheiling, and here the cattle and sheep were kept during the time when they might injure the crops if kept on the other side of the island. As in other parts of the country the ewes were milked daily. Ewe and lamb were allowed together during the day, but at night the lambs were folded. This not only allowed the milk to accumulate but kept the ewes from straying far during the night. In the morning the ewes were also folded, and the communication between where they were and where the lambs were was through a tunnel in the wall,

about three feet from the ground, so that only one lamb could come at a time.

The only remains of a fortification are on the island of "Dun." The seaward end of this island is separated from the other part by a very narrow neck of land. There is also at this point a natural rock escarpment which raises the protected side considerably above the other. It was further strengthened by a low wall of large stones, which mostly remain in their original position. There are also visible the ruins of houses.

As a race the natives now are rather undersized and far from being robust or healthy. They are generally of slender form, with fair hair and a florid complexion. On the whole they are good-looking. The diseases to which they are most subject are spotted fever (?), dyspepsia and nervous disorders, with swelling and bowing of their limbs. There is also the mysterious boat cough. In their own opinion they get it by infection when a boat comes from Harris. Now, it is from Harris that the factor and their friends come, and when either come they remain for several days. During the whole of that time the natives stand about exposed to the weather in a way to which they are not accustomed. During that time, also, they partake of a good deal of spirits, of which they seldom partake at any other time. The whole way in which they live at such a time is quite abnormal, and the wonder would be if they escaped a cold. When boats come from other places from whom they get little spirits and no violent upset of all their usual habits, there is no such result. When hooping cough, measles, or scarlet fever visit the island, there are more than the average number of deaths.

The disease, however, which caused by far the greatest mortality was a visitation of small pox. It was brought to the island in the clothes of one of their number who died of the disease in Harris. It broke out just after a party had been left on Stack-an-armin to collect feathers. At such times they generally remain away for about ten days. Before that time expired the disease had made such progress that there were not in health a sufficient number to form a crew. Death after death followed. At last there were scarcely sufficient left to bury the dead. As they had then no

spades, one man is said to have dug eleven graves with the back board of a wool card about 18 inches by 9 in size. No coffins were attempted. So weak were the survivors, that when the dead bodies sometimes fell off the planks on which they were being carried, they were unable to raise them up again, and had to drag them to their graves. The hand of death was heavy on the place; out of twenty-five families only five could keep a fire. There were ninety-four deaths. When the factor came next summer he found those who had been left on Stack-an-armin all well. They lived on fish and fowls, but at times suffered much from cold and hunger. They made fish-hooks out of a few rusty nails, and also contrived to stitch together their clothing with feathers and patch them with the skins of birds. They returned mostly to empty houses, crops generally never reaped, and the cattle roaming about half wild.

Strength is the quality they most admire, and they are always boasting of the strength of their ancestors. In proof they pointed to the large stones in some of the old walls and ruins. I got them persuaded after a little to build for themselves new houses on a more enlarged and better plan, but I could only get them to work when I wrought along with them. So long as I could be with them they would work quite eagerly, but whenever I had to leave they soon got tired. One evening there was a large stone which I wished raised to a certain position, but they thought their ancestors only could do that. Next morning I got up early, and before any one was about had it raised by means of levers and a bank into position. I cleared everything away and left. Soon I found them all looking at it in astonishment, and I explained to them that probably it was knowledge more than strength that their ancestors possessed, and at anyrate that it was by knowledge that they must emulate their achievements. I showed them how it could be done, but did not show them how badly I had bruised my thumb.

Of their most ancient houses several still remain entire. They are circular or nearly so, and roughly built. The walls are 6 or 7 feet thick, with spaces for beds left in them. These bed spaces are roofed with long slabs, and the entrance from the interior of the house is about 3 feet by

2 feet. The walls are not arched but contracted gradually by the overlapping of the stones to nearly a point. The entrance door is about 3 feet by $2\frac{1}{2}$. The outside is covered with earth and rubbish and appears like a green hillock. In some places they are almost entirely underground. The furniture of these houses, so far as I can ascertain from tradition and what still remains, was a quern, a hollow stone called *clach shoilse*, filled with oil and a cinder of peat for a wick: a vessel made of badly burnt clay called *cragan*, which was used for a pot, a water pitcher and a dish to drink out of, and a rope made of hide. The houses which they occupied when I came to the island were larger and more oval shaped. The walls were 7 or 8 feet thick, about 6 or 7 feet high, and the same height all round. The beds were in the thickness of the wall as before. There was also the same absence of a window. The only opening for light was a small circular opening at one end where the thatch joined the wall, left for the exit of the smoke. The door aperture was near the end and faced the east. It was higher than that in the former houses, and had a wooden door with wooden hinges and lock. A partition of rough stones about 4 feet high, called *fallan*, divided the abode of man and dog from that of cattle. There was a light wooden roof resting on the inner edge of the wall covered with about 18 inches thick of straw simply laid on, and not in layers as ordinary thatch. When beaten flat and uniform it was secured by numerous straw ropes called *siman*.

The straw used was that of barley. The barley when ripe was pulled up by the roots and made into sheaves. When these were dry they were cut in two and it was the root half of the sheaf which was used for thatch. The reason why it was put on in such quantity and in the above loose way, was, that in spring, when the young barley was about two inches high, the thatch was taken off the house, and the half of it which was next the rafters and impregnated with soot, was taken and spread as a top dressing over the young barley. The remainder, which had been the outer layer, was now replaced and formed the summer thatch. In autumn about a foot of fresh straw would be added and all made snug before the winter

gales. This way of roofing left a broad walk along the top of the wall. As these thick walls were only faced with stones and filled up in the centre with earth and rubbish, and the houses generally touched each other, there was a broad grassy walk from house to house along the top of the wall. The furniture consisted of an iron pot or two; a chest or two; a wooden dish called *buta* and another called *cuman*; a straw vessel like a large flat-bottomed beehive called *loban*; an iron lamp called *cruisgean*; a quern, and a few old barrels, some of them hooped by a rope made of a kind of ground willow twisted. The cattle occupied the division next the door, and it was not cleaned out till spring. At the other end lived the family, and there all the ashes, dirty water, and still worse, was spread out over the floor, and covered from time to time with layers of dry peat dust. Before the time of removal for use in spring the mixture was often higher than the side walls, so that a visit to a sick parishioner was quite an adventure. Owing to the thickness of the wall the door of the house was at the end of a low tunnel. Before the door, and extending part of the way into the tunnel, was a hole into which was thrown all the birds not used for food, the refuse of the others, and such like abominations. As the doorway was not more than 5 feet high, you had to make your way past this in a stooping position, till at the end of the tunnel you reached the door. If it was spring-time, on passing the door you had to climb up among the cattle, which got excited from the presence of a stranger, the barking of dogs, and the shouting of your friends above. Amidst great excitement you got helped along, and hoisted over the 'fallan.' Now you had to creep along on hands and feet, as it was only near the centre of the house that one could even sit upright. In this way you arrived at the edge of the steep slope above the bed opening, down which you went headforemost, nothing visible above but your legs, while you spoke and prayed with the sick. They wonder themselves that they are not so strong as they believe their ancestors were. The wonder rather is, that under such conditions they survive at all. In building new houses for themselves afterwards, all these houses were removed except a small one occupied by a widow.

V.

NOTE ON A HOARD OF SILVER COINS FOUND AT LOCHMABEN.

By GEORGE MACDONALD, M.A., LL.D., Curator of Coins.

On October 11th, 1904, while a labourer named Matthew Green was filling in a sewage drain in Easteroft Park, Lochmaben, he came upon a jar containing a number of silver coins. The jar (fig. 1) which has been purchased for the Museum, is an interesting specimen of fourteenth century domestic pottery. The upper part and the handle are broken



Fig. 1. Jar found with coins at Lochmaben. $\frac{1}{4}$.

away. The portion that remains is about $6\frac{1}{4}$ inches high, with a diameter at the bottom of $3\frac{1}{4}$ inches. It is almost bottle-shaped, and the red ware of which it is formed has originally been covered by a yellowish green glaze, small patches of which are still visible. It should be compared with a very similar jar which was found—also full of coins—in the spring of 1889 at Neville's Cross, Durham, and which has been described by Sir John Evans in the *Numismatic Chronicle*.[1]

[1] 3rd Series, vol. IX., pp. 312 f.

The Neville's Cross hoard contained a fair proportion of coins struck by Robert II. It must, therefore, have been deposited some time after his accession in 1371. Internal evidence indicates that the Lochmaben jar was buried or lost about half a century earlier. The finder believes that, when he counted the coins, there were 476 in all. Only 448 reached the hands of the King's Remembrancer. Examination showed that they fell to be distributed as follows:—

Alexander III.	
Long Cross Pennies	9
Edward I.	
Pennies with EDW R	
London	87
Bristol	9
Canterbury	29
Chester	1
Durham	15
Newcastle	5
York	8
Dublin	5
Pennies with EDW REX	
London	3
Edward II.	
Pennies with EDWA R	
London	90
Berwick	7
Bury St. Edmunds	11
Canterbury	51
Durham	16
Pennies with EDWAR R	
London	31
Bury St. Edmunds	14
Canterbury	29
Durham	9
Pennies with EDWARD R	
London	6
Foreign Sterlings	12
	448

The Scottish coins were all common. There was present no variety not already represented in the Museum. The Edward pennies were of considerable interest, not because of the rarity of individual specimens, but because of the opportunity for careful analysis which so large and homogeneous a find presented. The results of such an analysis, however, concern English rather than Scottish numismatics, and they have accordingly been set forth elsewhere.[1] The large representation of the pennies of Edward II., combined with the absence of any pieces that can with reasonable probability be attributed to Edward III., renders it practically certain that the date of deposit must be placed at the end of the reign of Edward II., or at the very commencement of the reign of his successor. This view is fully borne out by the evidence of the twelve foreign sterlings. The following kings, princes and bishops accounted for eleven of these—John of Hainault (1280–1304), Robert of Béthune (1305–1322), John III. of Brabant (1312–1355), John the Blind (1309–1346), Guy de Collemède, Bishop of Cambray (1296–1306), Valéran II. of Ligny (1316–1354), Gaucher of Porcien (1303–1329). The twelfth represented a variety whose exact attribution is doubtful.[2]

It remains to draw attention to the comparatively small proportion of Scottish coins which the hoard supplied. Unless it was "creamed" before the Exchequer authorities received it, only about two per cent. of the total were minted in Scotland. The usual average is one in thirty. Here the native product was actually outnumbered by the foreign counterfeits.

[1] *Num. Chron.*, 1905, pp. 63 ff.

[2] Chautard, *Monnaies au type sterling*, p. 130, No. 197.

VI.

THE OLD BLACKFRIARS OF GLASGOW. By Rev. J. PRIMROSE, M.A., F.S.A. Scot.

The principal source of our information on this subject is the volume published in 1846 by Dr Joseph Robertson for the Maitland Club, entitled *Liber Collegii Nostre Domine*, and the *Munimenta Fratrum Predicatorum de Glasgu*. This volume, needless to say, is marked by the wide and accurate scholarship characteristic of its accomplished editor. Indeed, so thoroughly has the task been performed, that it still remains the standard authority concerning the ancient Dominicans or Blackfriars of Glasgow. It may be observed, however, that Prior Conway of the Dominican Convent, Salford, Manchester, has a volume passing through the press entitled *Scotia Dominicana*, taking up the history of the Order pertaining not only to Glasgow but to the whole of Scotland, from 1230 A.D. to 1559 A.D.—a volume which contains the results of years of research among the archives of the Order kept at Rome, as well as among the Vatican archives.

But confining attention to Dr Joseph Robertson's preface to the *Liber Collegii*, there are two slight inaccuracies that should be mentioned. The first is at p. 40, in the supposed identification of Greyfriars Wynd with a vennel which, about the year 1300, was called the vennel of the Friars Preachers. To make the matter plain, let me say, that while the Blackfriars settled in Glasgow in 1246, it was not till 1476, over two centuries later, that the rival Order of the Greyfriars came to the city. As it happened, the Greyfriars erected their buildings on the opposite side of the street from the Blackfriars, but at a considerable distance back from the front of the street, as was customary with the lowly-minded followers of St Francis. Each of their houses, however, had a vennel or wynd contiguous to their respective properties, the one known as the Blackfriars, the other as the Greyfriars Wynd.

The inaccuracy, then, occurs through Dr Robertson identifying these

two wynds, a mistake into which he was led, in all probability, by the ambiguity of the description of vacant ground contained in a record of the year 1300, as quoted in the foot-note.

The second inaccuracy results from the mistaken interpretation of an entry in the wardrobe accounts of King Edward I. Mr Joseph Bain, in his Rhind Lectures, *The Edwards in Scotland*, pp. 35–36, has drawn attention to this point. Not only Dr Robertson, but other historians have asserted that Edward I., during his visit to Glasgow in 1301, resided within the Convent of the Blackfriars, and that he recompensed their hospitality by a donation of six shillings. It appears, however, as Mr Bain shows, that the six shillings was a donation to the Blackfriars towards providing them, for the space of three days, with a better diet than they were usually accustomed to. The likelihood is that Edward I., who carried about with him in his Scottish campaigns a portable chapel, in a wagon drawn by ten oxen, would not reside, when in Glasgow, even in the Bishop's Palace, seeing that the Bishop in those days was Robert Wishart, that patriotic Scotsman who was a source of considerable trouble to Edward, and who more than once rebelled against his claims of supremacy. King Edward, we should imagine, would encamp with his soldiers on the field.

But passing from these slight inaccuracies to refer to some of the many excellencies of this volume on the Old Blackfriars of Glasgow.

It preserves for us the older topography of Glasgow, and is specially valuable in furnishing us with the older spelling of the place-names of the city and neighbourhood, these being gathered together alphabetically in the index. The most ancient document, however, relating to Glasgow, and which in this respect is of the greatest importance, is the Inquest of David I., drawn up early in the 12th century, and edited in 1901 by Mr J. T. T. Brown. Here we possess the earliest spelling of the place-names about Glasgow, but which in several cases are difficult to identify, through the blundering, probably, of the French ecclesiastic who transcribed them.

Another excellency of this volume on the Old Blackfriars is that it

contains one of the earliest specimens of the vernacular of Glasgow, in one of the Munimenta, dated 1433. This deed represents John Flemyn of Cowglen conveying to the Blackfriars a rood of land adjoining their place in the High Street, on certain conditions, viz., that the prior and convent undertake to pay 10s. yearly, and to find stabling for two horses to the said John Flemyn, "quhen hym lykis tyll cum tyll do hys errandis or mak residens, within the town; & attour gyf it lykis the said Johne Flemyn tyll cum & dwell within Glasgu, the said Prior sall byg tyll the said John an honest hall chamir & butler with a yard for to set cale in."[1]

Another of the Munimenta, dated 1454, gives us interesting sidelights into the religious life of Glasgow in pre-Reformation days. It shows, for example, how powerfully the belief in Purgatory was held. John Stewart, described as the first Provost that was in Glasgow, stipulates in his will that mass be offered for his soul every Friday in the year at St Katherine's altar in the Blackfriars Kirk, St Katherine of Sienna being a favourite saint among the Blackfriars: also that, on the anniversary of his decease they should cause St Mungo's bell—a quadrangular shaped handbell, and one of Glasgow's most venerable relics—to be rung through the city, calling upon passers-by to pray that day for the souls of the departed named by the bellman. Further, the will stipulates that "Dirige" and "Placebo" be chanted in their choir, "Dirige" being a portion of the 5th Psalm and "Placebo" a portion of the 116th Psalm, the former being sung at matins, the latter at vespers. While a farther stipulation was, that a mass be sung at St Katherine's altar by the whole convent; every friar—and it is said there were no fewer than thirty—receiving, to quote the original, "sex penyis & a galoun of the best sale ale of the town to the conventis collacioun."[2]

Another glimpse of these Old Blackfriars is obtained from the Glasgow Protocols, Nos. 37, 138, 161, 1286, edited by Mr Robert Renwick, Depute Town Clerk, and the greatest living authority on the history of Glasgow. From these documents it appears that the altar of the B.V.M

[1] *Munimenta*, pp. 166–167. [2] *Munimenta* pp. 177–178

in the Blackfriars Church was a favourite spot on which money was placed in presence of witnesses when property was being redeemed. Even years after the Reformation, when the altar had been removed, the same practice obtained at the site of the ancient altar, as if a peculiar sanctity attached to business of that kind transacted there.

There is now no trace of the buildings, added to at successive times, of these Old Blackfriars of Glasgow. The last of the ruins was removed many years ago. It would appear, however, that the ancient church of the Blackfriars, erected in the time of William de Bondington, Bishop of Glasgow, he who erected the elegant choir and crypt of the Cathedral, was a splendid edifice. M'Ure, in his History of Glasgow, published in 1736, quotes Mr Miln, architect to King Charles I., and who surveyed it in 1638, as saying, "that it had not its parallel in all Scotland, except Whittairn in Galloway." Captain Slezer, in his *Theatrum Scotiæ*, published in 1693, furnishes a bird's eye view of the College of Glasgow and the adjacent Church of the Blackfriars. But the style of the church building he represents does not approach the standard one would expect from the description given by M'Ure. Probably the exterior had been considerably altered before that view was taken. We know from various sources that after the Reformation the church fell into a ruinous condition and was several times repaired. Again, in 1670, it was struck by lightning and so destroyed that a new church was erected in 1699 on the same site. This came to be known as the College Church, and it continued till 1877, when it was removed to make way for railway extension.

After the Reformation the endowments and property of the Old Blackfriars were transferred to the possession of the College or University of Glasgow. There is, however, one reminder of this ancient Order in daily use, in the impression of the seal of one of its Priors, as the inscription round its margin informs us. In the centre of the seal is an effigy of St John the Evangelist, who holds in his right hand the active sword representing the Word of God, while in his left he holds the chalice, with three nails above it, the chalice and the nails symbolising

the Last Supper and the Passion. This seal, it appears, was that of Prior John Spens, B.D., who was Superior of the Order in Glasgow, 1517–1519.

In bringing this paper to a close, it may not be amiss to state that the Blackfriars, as a rule, settled in University and cathedral cities: for while the Greyfriars sought, like the modern Salvationists, to evangelise the masses, the Blackfriars, on the other hand, gave prominence to work among the classes. They paid great attention to preaching the Word, which they considered was sadly neglected in the 12th century by the clergy, who were too prone to substitute ritual for preaching, or, as we should say, the service for the sermon. Hence, from the emphasis the Blackfriars gave to preaching, they were styled the Order of Friars Preachers, among their most eloquent representatives being John de Vicenza and Savonarola of Florence.

Another point meriting attention is that the Blackfriars have ever been regarded by the Church of Rome as the upholders of orthodoxy and defenders of the faith; hence their association with the terrible atrocities of the Inquisition. Although St Dominic, the founder of the Order, has been cleared of all complicity with the Inquisition, his followers undoubtedly were among the leading persecutors of what they styled heresy. This explains why Prior Alexander Campbell of the Blackfriars acted as accuser of Patrick Hamilton of St Andrews, 1528, and why later on, in 1556, John Knox was summoned to appear in the Blackfriars Church, Edinburgh.

VII.

NOTICE OF THE EXPLORATION OF THE REMAINS OF A CAIRN OF THE BRONZE AGE AT GOURLAW, MIDLOTHIAN.

By FRED. R. COLES, Assistant-Keeper of the Museum.

In December 1904, during the ploughing of a field which had lain fallow for twenty years on the farm of Gourlaw, Lasswade, the ploughshare was arrested by the edge of a large stone. On this being reported to Mr R. M. Brockley, the tenant, means were taken to remove the stone, a ponderous mass of sandstone nearly 3 feet high, 2 feet thick, 4 in breadth, and standing upright. A cavity was prepared to the south of it into which it was canted over. During this operation, a great quantity of blocks and rounded boulders, mostly of sandstone, much to Mr Brockley's surprise, was disclosed. They lay closely packed over a space rudely curvilinear, extending to the S.E. and S.W. of the great stone for about 10 feet and downwards to a depth of over 4 feet, irregularly. The great stone being rolled over into the loosened soil, was there left until the 13th of January 1905, when Mr Brockley, now recovered from an illness, went to the spot, where, during the removal of other stones, there was disclosed, at a depth of over 5 feet, the base of a large Cinerary Urn inverted over a heap of incinerated bones. This discovery being reported to Dr Anderson, with the offer of the urn to the Museum, the Hon. John Abercromby visited Gourlaw on the 13th of February, and through his examination of the site, I was instructed to go out and draw up a full report of the circumstances, and if necessary to continue the excavation. This occupied me during the 17th and 18th of February, when, by the intelligent interest shown in the investigation by Mr Brockley himself and his son, and the care exercised by the workmen, sufficient notes and measurements were made for the compilation of the following account.

Gourlaw is the name attached to a conspicuous and extensive hillock of sand rising to the height of 629 feet above sea-level, and about

40 feet above the surrounding pastures and arable land.[1] The farm is the property of Col. R. G. Wardlaw Ramsay of Tillicoultry, and is situated about one mile and a half S.S.W. of Hawthornden Station and half a mile nearly east of Rosslynlee Station.

The southern slope of Gourlaw is the longest and the least steep, and it is here, on the ground known as the Stackyardfield, that the remnant of the cairn under notice was discovered.[2] The soil is a rich brown sandy loam mingled with very minute pebbles, but throughout the field there is a marked absence of stones or boulders of any considerable size. When, therefore, a continuous layer of large stones was disclosed, both extensive and deep, to the south of the great sandstone block scraped by the ploughshare, Mr Brockley's conjecture as to their being artificial was speedily corroborated by the discovery of the large urn.

On my first examining the site, scores of these large stones and boulders were lying down the slope of the field, removed from the space close to the great stone (A in the ground-plan, fig. 1) The inner edges of many more still protruded in a roughly curved line to the east and west. Assuming that the Cinerary Urn (at B on the plan) was the central burial, I measured off a radius of 6 feet (*i.e.*, a length equal to the original distance between the great stone A and this urn), and on the S.W. arc we disclosed the second urn, C,—a very small one of distinctly cinerary type. It was covered by a good-sized, flat, somewhat oval slab of whinstone, and lay, like the large urn, inverted. On raising it, it proved to be full of soil and pebbles, and the base was stained for about 1 inch in depth to an almost black hue, with a soft and rather unctuous substance.

Working round on the south arc at the same radial distance from A, we

[1] In the flat ground on the north of Gourlaw, there was found in 1871 a finely ornamented Stone Whorl, which was then presented by Mr Brockley to the National Collection, and is figured on p. 80 of the Museum Catalogue.

[2] The exact spot where the Cinerary Urn was deposited can at any time be found by measuring westwards from the garden wall along the stackyard dyke for 57 feet 8 inches, and then vertically from that point down the field for a distance of 26 feet 5 inches.

next found a pretty large mass of charred remains (D on the plan) and material, which, being of the character of pottery but extremely soft, I recognised as probably all that was left of a third urn, with its contents of

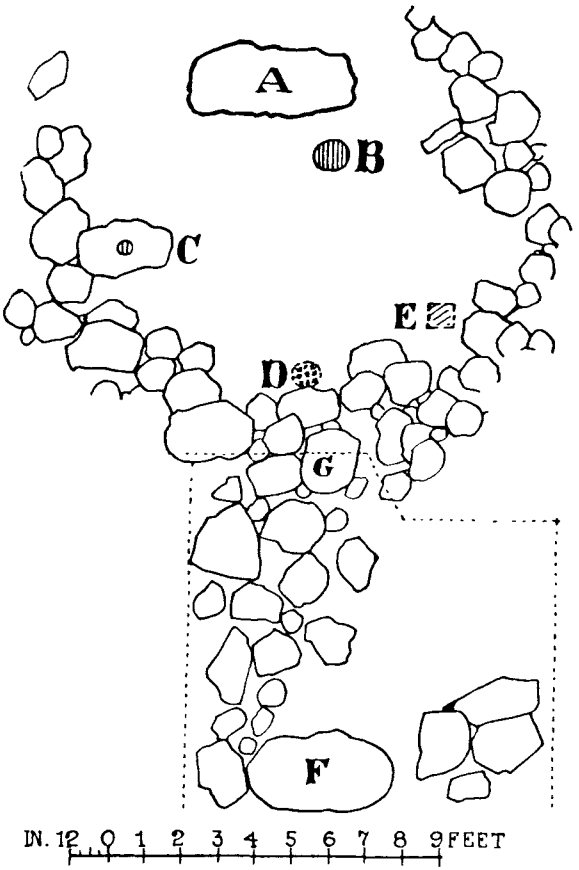


Fig. 1 Ground plan of remains of Cairn at Gourlaw.

burnt bones. All this material was passed through a sieve of $\frac{1}{8}$ inch mesh and examined, but yielded no results. We encountered no covering slab in this instance, hence perhaps the decay of the sepulchral vessel.

On the S.E. arc we then found a simple deposit of charcoal and burnt bones, the latter extremely scanty. This, with much of its surrounding sand, was all passed through the sieve, but without disclosing any relics.

At a date subsequent to my visit to Gourlaw, Mr Brockley ordered the removal of a great many more of the stones still embedded in the soil to the south of D; and at a point about 2 feet 6 inches distant, below a large flat slab of white very soft sandstone (G in the plan), another incinerated deposit was discovered, of much the same simple nature as that already noticed at E.

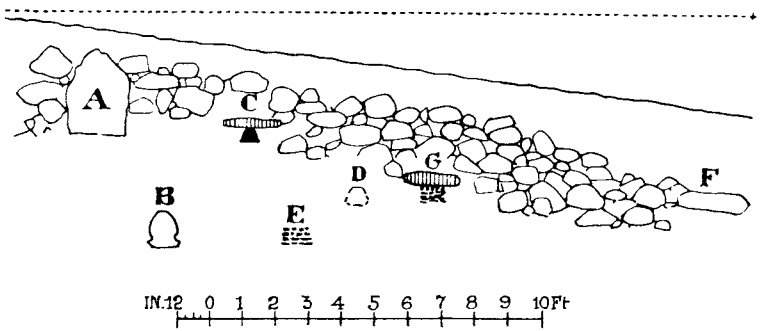


Fig. 2. Section of remains of Cairn at Gourlaw.

In the sectional view, I have attempted to show these several deposits in their true relation to each other and to the surface of the field (fig. 2),—the large Cinerary Urn (B) at a depth of 6 feet below the surface of the field, the small Cinerary Urn at a depth of 3 feet 6 inches, the deposit at D (placed within an urn too much decayed to be handled) at a depth of 5 feet 3 inches, and the plain un-urned deposit at E at a depth of 6 feet 6 inches.

It is improbable that the great block of sandstone first noticed (A on the plan) had really any intended association with any of these four interments; but it may possibly have been one of many similar blocks laid on the circumference of the sepulchral area in the usual

manner, the others on this, the upper edge of the cairn, having been removed for the purpose of building the dike at the stackyard. If so, the spoliation of the cairn must have occurred over a century ago, as there is no tradition of a cairn in the family of Mr Brockley.



Fig 3. Large Cinerary Urn found at Gourlaw, Midlothian.

Description of the Urns and Relics found in association.

The large Cinerary Urn (fig. 3), apart from its size, which is also noteworthy, presents at once two features not common amongst sepulchral vessels of this period. It possesses a remarkably deep hollow "neck" just below the overhanging brim. In the Museum there is only one

other cinerary urn having this well-defined "neck"—the urn that was found on the Braid Hills golf course in 1901. But the curvature and modelling of the "neck" in the Gourlaw example surpasses the other in both depth and exactness of line. The walls of the body of the Gourlaw urn, moreover, are beautifully curved downwards towards the base, this feature being carried out with a precision not observable in any other of the cinerary urns.

The second remarkable feature is, that the inner surface of the Gourlaw urn bears decoration extending downwards from the lip for a space $2\frac{3}{8}$ inches in depth. The photograph, from which the illustration (fig. 3) is reproduced, was taken before the broken pieces of the

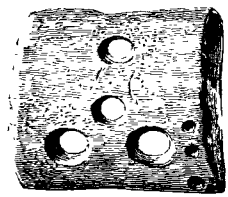


Fig. 4. Perforated bone object found among the burnt bones in the large urn at Gourlaw.

base were cemented to the urn: and it therefore does not show its height in full.

The dimensions are: vertical height, $14\frac{3}{8}$ inches; diameter of mouth, $12\frac{1}{2}$ inches; diameter of base, $4\frac{1}{2}$ inches; diameter of neck, $12\frac{1}{2}$ inches, and diameter of the rim, $13\frac{3}{8}$. The pottery is of fine and well-mixed clay.

The decoration of the urn consists on the inner surface of a band $2\frac{3}{4}$ inches deep, bounded by horizontal lines containing a large chevron pattern. On the outside, a similar band of chevrons quadrupled, also $2\frac{3}{4}$ inches deep; and in the "neck" a band $2\frac{1}{2}$ inches deep, consisting of a triple row of chevrons larger and bolder in style than the others.

Amongst the incinerated bones covered by this large urn, there was found a small bone object (fig. 4). It measures 1 inch by $\frac{7}{8}$ inch, and is

$\frac{1}{4}$ inch thick. It is slightly convex; and is pierced by four cleanly-drilled holes, with three small circular depressions slightly sunk, along the margin. There is no object in bone in the Museum at all resembling this curious little piece.

The small urn (fig. 5 and C on the plan and section) is specially interesting because of the great resemblance it bears to the typical specimens of cinerary urns proper. In this respect it is unique among our urns. It measures in height $4\frac{3}{4}$ inches, across the mouth $4\frac{1}{2}$ inches,



Fig. 5. Smaller Cinerary Urn found at Gourlaw, Midlothian.

across the base $2\frac{7}{8}$, and across the widest part of its overhanging brim $5\frac{1}{2}$ inches. It is made of a fine clay, much darker in hue than that of the large urn, and smoothed almost to a glossy surface. Like the larger vessel, this urn has decorative lines within as well as without: but the scheme of ornamentation is quite different. The lip, which slopes very slightly inwards, has two horizontal rows of impressions, as if made with a twisted cord: next, on the inner wall of the vessel, there are numerous vertical lines, made in the same manner, and placed about half an inch apart. The exterior surface of the brim of the urn is divided into five large triangular spaces, each of which is marked

across horizontally by five, six, or seven lines, all of this being done as if with a twisted cord. About $1\frac{1}{4}$ inches below the brim runs a horizontal line crossed by numerous vertical lines $\frac{3}{8}$ inch apart, done in the same manner as the rest. The spacing of the triangles on the brim not being sufficiently accurate, one space has been filled up with a vertical line.

During the removal of the many large stones lying to the south of the deposit (D on the plan), and among the charred matter discovered below the large stone (F), Mr R. Brockley found a fragment of a slender whetstone or small polishing stone. It is only $\frac{3}{4}$ of an inch long and $\frac{1}{4}$ of an inch in thickness, and is triangular in section.

The dotted lines in the lower part of the ground-plan indicate the area that was dug through by Mr Brockley, jun., on a date subsequent to my last visit to Gourlaw: but this examination proved barren of results.

VIII.

NOTES (I.) ON A HUMAN SKELETON FOUND IN A CIST WITH A BEAKER URN, AT ACHAROLE, WEST WATTEN, CAITHNESS, AND (II.) ON THE CRANIAL FORM ASSOCIATED WITH THAT TYPE OF CERAMIC. By THOMAS H. BRYCE, M.A., M.D. WITH AN APPENDIX ON SIX SKULLS FOUND WITH BEAKERS IN THE NORTH-EAST COUNTIES. By ALEXANDER LOW, M.B., C.M., Aberdeen University.

The following account of the Acharole Cist and Urn has been communicated to me by Dr Joseph Anderson.

In August last, Mr Robert Sutherland, while excavating gravel from a gravel-pit to mend a road on the hill of Acharole, West Watten, Caithness, discovered a cist, containing an unburnt burial, and an urn of the "beaker" or "drinking cup" type. The cist (fig. 1) was at a depth of about six feet from the surface of the slight eminence in which the gravel-pit was excavated. It was constructed in the usual way, of four flat slabs set on edge for the sides and ends, with three irregularly shaped flat stones over them for a cover. The cavity of the cist was

three feet in length and about the same in breadth, and eighteen inches in depth. The skeleton lay in the usual contracted position, with the head towards the north, and the urn placed at the right side of the head.

Unfortunately, owing to the friable nature of the urn and the incautious handling to which it was subjected, it soon went into many fragments: but the greater part of the fragments having been recovered and pieced together, the form and decoration of the vessel appear as shown in the accompanying woodcut (fig. 2). It is a fine example of the low-



Fig. 1. Cist at Acharole, West Watten, Caithness.
(From a photograph by Mr James Sutherland.)

brimmed variety of the beaker or drinking-cup type of sepulchral urn, usually deposited with an unburnt interment. It measures $7\frac{3}{4}$ inches in height by $5\frac{3}{4}$ inches in diameter across the mouth, and 3 inches in diameter at the base. The thickness of the wall of the vessel is not more than a quarter of an inch throughout, and the top of the brim has a slight bevel to the inside. The paste is dark-coloured and rough on the interior surface of the vessel, showing a plentiful intermixture of small fragments of quartz, while on the exterior the colour is a deep reddish-brown, the surface smooth, and the intermixture of quartzy fragments not so perceptible. The ornamentation of the exterior surface

is arranged in zones or bands of about an inch or more in width, passing round the vessel horizontally, with plain spaces of about the same width between them. The whole of the ornament is linear in character, consisting of lines of impressions made in the soft clay by an instrument toothed like a comb. The uppermost band, which is 1⅞ inches in width, has a marginal border above and below, consisting of two parallel horizontal lines running all the way round, about a tenth of an inch apart. The band of ornament within these marginal borders consists

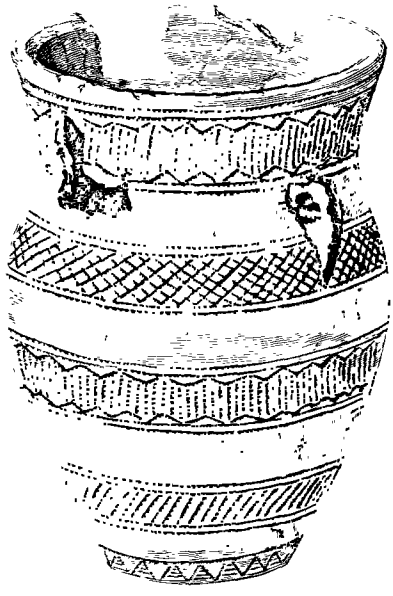


Fig. 2. Urn from the Cist at Achatole. (⅓.)

of closely set parallel lines about an inch in length, running nearly in a vertical direction, but with a uniform inclination towards the right, and bordered above and below by zigzag lines, each zigzag enclosing the ends of five or six of the almost vertical lines. The second ornamented band has, within its double marginal horizontal lines above and below, a band of parallel lines about an eighth of an inch apart, crossing each other obliquely in opposite directions almost at right angles, and forming a net-work ornament between the inner lines of the double margin. The third ornamental band is similar to the first, but slightly narrower.

The fourth is a band of oblique lines inclined to the right, parallel to each other, and about an eighth of an inch apart, and bordered above and below by double marginal lines running round the vessel in a horizontal direction. The ends of these lines on the upper side of the band have not met exactly, and are carried past each other for the space of about an inch. The plain space underneath this band is only half an inch in width. The fifth and lowest band of ornament, which is also only half an inch in width, has a single marginal horizontal line bounding it on the upper side, the lower side being the line of circumference of the bottom of the vessel. The ornament is made by a zigzag dividing the surface of the whole width of the band into a series of almost equilateral triangles, and filling the alternate triangles which have their bases impinging on the circumference of the bottom of the vessel with lines parallel to their bases. Altogether, the effect of the ornament is pleasing to the eye, and both in shape and ornament the urn is one of the most artistic productions of the period. It is also the furthest north example yet recorded in Scotland.

The Society is indebted to Rev. Alexander Miller, Buckie, and Mr James Davidson, Old Hall, Watten, for notice of the discovery and particulars of the burial. The urn was recovered by the King's and Lord Treasurer's Remembrancer. The skull and long bones were recovered and sent for description by Sir Francis Tress Barry, Bart., M.P., Keiss Castle.

The osseous remains submitted to me from this cist consist of a very well preserved though somewhat broken skull: an imperfect lower jaw: a humerus: and a femur of which the lower end is absent.

The skeleton is that of a male in the early part of adult life.

Long bones.—The muscular markings are moderately well marked. The *humerus* is relatively short, having a maximum length of 320 mm. The *femur* shows a distinct degree of subtrochanteric flattening, and a marked, almost pilasteric, salience of the linea aspera. The *platymeric index* is 73·2, the pilasteric 119. The data for the calculation of the stature are deficient: but if the maximum length of the *humerus* be taken as $\frac{1}{5}$ of the height, we get the figure of 1·6 meters, or 5 feet 3 inches.

Skull.[1]—The skull is well preserved, save that there is a deficiency in the right parieto-occipital region, and the right malar and maxillary bones as well as the mandible have been damaged.

[1] For measurements, see table on page 426.

It is of moderate dimensions, the circumference measuring 512 mm., and the internal capacity being 1425 *cc.* (within a few units) of mustard seed.

The muscular markings are slightly developed: the glabella and supraorbital ridges are prominent, but not exaggeratedly marked: and the mastoid processes and inion are relatively small. The upper margins of the orbits are specially thick, and the external angular processes broad and turgid. The supramastoid crest is salient to an exceptional degree, so that there is a marked groove between it and the mastoid, and there is a distinct fossa at the junction of the squamous and parieto-mastoid sutures. There is a large mesial Wormian bone at the lambda.

Norma lateralis (fig. 3).—The vault is relatively high. From the prominent glabella the frontal bone slopes backwards with a gradual flat curve to the bregma, with a certain amount of sinking in at the ophryon. The vertex is nearly flat, and very slightly ridged—the highest point, when the skull rests on the alveolo-condylar plane, being slightly behind the bregma. The posterior curve falls away very steeply to the lambda, and the occipital probole projects to only the slightest possible degree. There is thus marked parieto-occipital flattening. The frontal segment exceeds the parietal in length.

In respect of the characters of the outline, the skull resembles the type of *sphenoidal* cranium called by Sergi *Sphenoides latus declivus*.

Norma verticalis (fig. 4).—This view brings out the very brachycephalic character of the skull. The index is as high as 85·8. Its outline is *sphenoidal*. The glabella and supraorbital ridges are seen, owing to the backward slope of the frontal bone, while the zygomatic arches are hidden by its marked lateral bulging. The occipital curve is uniform and flat. The general outline corresponds exactly in shape to Sergi's type, *Sphenoides tetragonus*.

Norma occipitalis (fig. 6).—The parieto-occipital flattening gives a flat appearance to this view. There is a slight sagittal elevation, from which the vault inclines down on each side to the level of the parietal



Fig. 3.

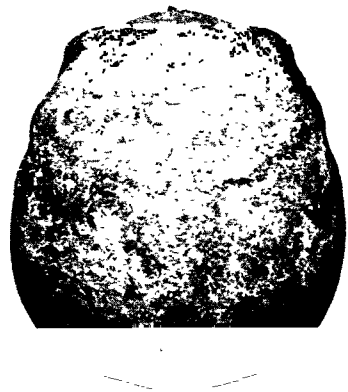


Fig. 4.



Fig. 5



Fig. 6

Figs. 3–6. Skull from the Cist at Acharole

eminences, below which the side walls are flat, so that the outline is broadly pentagonal. The base is specially broad, and the foramen magnum far back and nearly circular.

Norma facialis (fig. 5).—The face is low and broad, with a somewhat quadrate outline; the nasal aperture is specially broad and low: the orbits approach the circular, but the width exceeds the height: the outer parts of the upper orbital rims are thick, passing into the specially turgid external angular processes. The malar bones are not specially prominent.

There is no trace of prognathism, the gnathic index being 90.

The *mandible* is unfortunately incomplete. It is on the whole slight; the body is of moderate depth: the chin is well marked and the symphysis inclined forwards: the angle is very slightly everted. The mandibular index (Arthur Thomson), which was calculated approximately, is very low in association with the low gnathic index.

Teeth.—In the lower jaw the third molars have not erupted, but they are present in the upper jaw. On the right side the second and third molars have been lost by caries, and the sockets have been absorbed: on the left side the wisdom is crushed into a very limited space, and the socket is single. Only two teeth have been actually preserved: their crowns are partially, but not greatly worn.

The sockets of the incisor teeth are quite vertical, so that there can have been none of the alveolar prognathism seen in some of the skulls of this period.

To sum up—the skull in shape and outline is sphenoidal; in proportions it is hyperbrachycephalic; it is platychamaecephalic (or wide and low) when height and breadth are compared, but hypsicephalic (or high) when height and length are correlated. The face is chamaeprosopic (or low and broad). The gnathic index puts it low in the orthognathous category. The nasal index falls so high in the middle group as to approach the platyrhine class. The orbital width is greater than the height.

II. On the Cranial Form associated with the Beaker Class of Sepulchral Urn.

It has been demonstrated by Hon. John Abercromby that the "drinking cup," or as he suggests it should be named, the "beaker class of sepulchral urn, is the oldest Bronze Age ceramic, and that it is an imported not a native type, having its centre of dispersion in Central Europe at the end of the Stone Age.

In the light of Mr Abercromby's results it becomes of special interest to examine more particularly the cranial form associated with the beaker urns.

The skulls recovered from Bronze Age interments in Britain are by no means uniform in type. The aphorism of Thurnam, "round barrows, round skulls," holds only in so far as the majority of specimens from the round barrows of England and the short cists of Scotland are of that type, and in certain districts this is not even true. Dr Wright[1] has recently shown that out of 62 crania from the round barrows of East Yorkshire recovered by Mr Mortimer, 20 are dolichocephalic, 24 mesaticephalic, and only 18 brachycephalic.

The question thus arises—admitting the specific difference between the two great classes—whether this diversity of type was due to mixture of races before, or after, the arrival of the new stock which undoubtedly invaded Britain at the beginning of the bronze, or perhaps in the transitional, period.

If the earliest Bronze Age ceramic were associated with a pure or even a relatively pure type of skull form, compared with the Bronze Age interments as a whole, an important light would be thrown on the ethnic relations prevailing at that period.

I know of twenty-eight examples in all of skulls which were found in this association. This is a relatively small number compared with the number of beakers recorded, and is too small a series for any absolute

[1] *Journal of Anat. and Phys.*, vols. xxxviii.-ix.

	1	2	3	4	5	6	7	8	9	10	11
	Acharole, Caithness.	Dunrobin, Sutherland.	Lesmurdie, Banff.	Juniper Green, Midlothian	Parkhill, (A) Aberdeen	Parkhill, (B) Aberdeen	Stoneywood, Aberdeen	Auchendour, Aberdeen	Cluterty, Aberdeen	Persley, Aberdeen	Fatish Ross
Described by	T. H. Bryce.	T. H. Bryce.	Cran. Brit. & T. H. B.	Cran. Brit. & T. H. B.	A. Low.	A. Low.	A. Low.	A. Low.	A. Low.	A. Low.	Sir W. Turner
Sex	M.	F.	M.	M.	M.	M.	M.	M.	M.	M.	M.
Cubic capacity	1425	1540	...	. .	1450	...	1420 ap.	1350 ap.	.	1500 ap.	1605
Glabello-occipital length	176	178	185·4	178	180	183	169	167	185	188	185·4
Ophryo-occipital length	172	178	183	176	178	180	169	162	182	184	.
Basi-bregmatic height	138	132	132	131	135	148 ap.	133	136	138	146	132
Length-height index	78·2	71·7	71·2	73·6	75	80·9	78·7	81·4	74·6	77·7	71
Minimum frontal diameter	94	99	...	..	102	..	100	91	102	100	.
Stephanic diameter	125	125	.		115		120 ap.	108	120 ap.	136 ap.	121·9
Asterionic diameter		111	119	110	137	..	110	113	115	120 ap.	104·1
Maximum breadth	151	146	157·4	147·3	153	160 ap.	156 ap.	142	156 ap.	160 ap.	149·8
Cephalic index	85·8	82·	85	82	85	87·4	92·3	85	84·3	85·1	80·8
Breadth-height index	91·4	97·9	83·8	88·8	88·2	92·5	85·2	95·7	88·4	91·2	88
Horizontal circumference	512	518	546·1	515·6	521	...	510 ap.	491	528	540	541
Vertical transverse arc	311	325	...	...	327	...	300	306	336 ap.	336 ap.	.
Biauricular diameter	135	123	130	127	131	...	124	128	130 ap.	130 ap.	...
Longitudinal arc: Frontal segment	128	132	133	128	135	132	128	123	143	132	127
Longitudinal arc: Parietal segment	120	118	123	124	125	118	120	120	140	148	132
Longitudinal arc: Occipital segment	113	120	115	116	100	...	111	...	110	117	127
Longitudinal arc: Total	361	370	371·0	368·1	360	.	359	.	393	397	386
Base line	134	138	139	129	137·	. .	131	...	138	135	.
Proportion of vault to base	2·69	2·71	2·66	2·85	2·62	.	2·74		2·81	2·91	.

Length of foramen magnum	35	38·5	38·4	33	36	..	37	...	37	38	..
Basi-nasal length	101	99	101	96	104	100 ap.	95	100	98	96	..
Basi-alveolar length	91	95	97	90	98	92	87	97	...	87	
Gnathic index	90	96·9	96	93·7	94·2	92	91·6	97		90·6	..
Interzygomatic breadth	146 ap.	..	..	..	142		126 ap	136		140	...
Intermalar breadth	131 ap.	111	...	..	115	...	114 ap.	114	.	110	
Nasio-mental length	112	105	113	116·8	108	122	107	108	...	110	
Nasio-alveolar length	70	63	65	70	64	80	61	67		67	
Complete facial index	76·7 ap.		...		76		84·9	79·4	.	78·5	...
Upper facial index	47·9	...	...	.	45	53·9	...	49·2	...	47·8	
Nasal height	49	45	50	56	48	53 ap.	48	50	55	48	
Nasal width	25	24 ap.	24	19	23	25	25	24	28	25	.
Nasal index	52	52	48	34	47·9	47·2	52·1	48	50·9	52·1	
Orbital width	37	39	43	40	44	.	40	40		44	.
Orbital height	32	35·5	34	32	33	...	30	31	.	32	..
Orbital index	86·5	91	79	80	80·5	...	75	77·5		72·7	.
Palato-maxillary length	50		52	55	51	56	51	55		52	.
Palato-maxillary breadth	57		68	58	55	61	61	66	...	56	
Palatal index	114	..	130·7	105·4	107·4	114·2	119·6	120	.	107·6	
Measurements of Lower Jaw. Symphysial height	34	27	30	31	30	...	28	31	30	30	
Coronoid ,,	68·5	48	55	61	59		50	60	63	63	
Condyloid ,,	70	..	.	73	58	.	48	59	64	54	...
Gonio-symphysial length	90	.	96	95	90	..	83	98	90	91	
Condylo-symphysial length	97 ap.	...	..	..	108	...	112	106	106	98	..
Bicondyloid width	133 ap.			..	127	.	113	121	110 ap	123	.
Bigonial width	.	...	...	.	101	.	96	112		107	...
Condylo-coronoid width	44·5			45	44		39	44	43	38	..
Breadth of ascending ramus	34	31	36	37	37	..	33	37	36	33	.
Mandibular index	72·9 ap.		.	..	85	...	99·1	87·6	96·3	79·6	...
Coronoid index	40 ap.	.	..	.	40·7	...	31·8	44·5	40·5	38·7	

conclusions; but as the sequel will show, the results of segregating the available specimens according to the type of the associated ceramic, is so suggestive, that for working purposes it will be desirable in the future to arrange the Bronze Age crania in terms of the fictilia.

Out of the twenty-six cases mentioned, eleven occurred within the Scottish area, and in the present paper I propose to consider these only in detail. They form a series complete in itself, as each skull was found singly in a closed short cist. This fact gives a greater amount of certainty in regard to the association with a beaker urn than can be attributed to the English examples, most of which were found in cistless barrows with multiple interments.

Of the eleven skulls, I have examined and measured four; six have been fully described by Dr Alexander Low, and one was recorded many years ago by Sir William Turner.

Description of Crania.

II. Skull from Dunrobin Park, Sutherlandshire.

This skull was found with a beaker in a cist in Dunrobin Park, Sutherland. The specimen is preserved in the museum of Dunrobin Castle, and for the opportunity of figuring and describing it I am indebted to the kindness of the Rev. Dr Joass, curator of the museum.

The skull is that of a young female between twenty and twenty-five years of age. The wisdom teeth have just erupted in the upper jaw, but are still within their sockets in the lower; the ankylosis between the occipital and sphenoid bones is not quite complete. The skull is a capacious one, having a capacity of mustard seed as high as 1540 cc., and a horizontal circumference of 520 mm.

Norma lateralis (fig. 7).—There is absolutely no projection at the glabella, and there are no signs of supraorbital ridges. The frontal bone rises vertically, with even a faint forward inclination, to the level of the prominent frontal eminences. The vertex is flat, and sinks in a somewhat gradual curve posteriorly down to the slightly bulbous occipital probole. There is none of the parieto-occipital flattening seen in the Achanole skull.

Norma verticalis (fig. 8).—The shape is a broad oval; the frontal bone is full and bulging, and hides the root of the nose, and would probably also have hidden the zygomatic arches had they been intact. The posterior curve is somewhat conical, due to the projection of the occipital probole. The breadth is relatively great, so that the index is 82. The outline, combined with the flat vertex, gives to the skull characters resembling Sergi's type *Sphenoides rotundus*.



Fig. 7.



Fig. 8



Fig. 9.



Fig. 10.

Figs. 7-10. Skull from the Cist in Dunrobin Park

Norma occipitalis (fig. 10).—There is no parieto-occipital flattening. There is a slight amount of sagittal elevation; and though the side walls are flat, there is more rounding out than in the Acharole skull, the parietal eminences being less prominent. The base is specially flat and straight, and the foramen magnum is oval.

Norma facialis (fig. 9).—Owing to the imperfect state of the face bones, few of the usual measurements can be arrived at. The great breadth and fulness of the frontal is a prominent feature, giving this view of the skull exactly the characters of the Acharole skull. The absolute length measurements are low, and looking to the internal breadth, there is no doubt that the face was broad and low. The forehead is perfectly flat, the upper orbital rims are thin, and the external angular processes narrow.

The orbital index is high, the height approaching the width, and the nasal aperture is broad.

The set of *teeth* is almost complete in both jaws. The first molar alone shows any wearing. There is distinct obliquity of the incisors, giving a certain amount of alveolar prognathism, and the gnathic index itself is relatively high.

Compared with the Acharole skull, the differences are chiefly to be attributed to sex and age; but there is to be specially noticed the more sloping curve of the posterior segment, and the absence of parieto-occipital flattening.

III. Skull from Lesmurdie, Banffshire.

This skull, which is figured in *Crania Britannica*, was recovered from one of a group of three cists all containing beaker urns. The skull is preserved in the National Museum of Antiquities, and I have remeasured it for the purposes of this communication.

It is so fully described in *Crania Britannica* that I need not here give more than the salient points, especially as, though a larger, heavier skull than the Acharole specimen, it agrees with it very closely in its form and proportions.

It is the skull of a male of over sixty years of age. Though its capacity cannot be accurately gauged owing to a deficiency of the vault, it is capacious, and its horizontal circumference exceeds that of any other member of the series. The glabella and supraorbital ridges are full and prominent, and the nasal notch deep; the frontal bone is more arched than that of the Acharole skull, but is not so full laterally, so that the outline of the norma verticalis approaches the type named by Sergi *Sphenoides latus*. There is marked parieto-occipital flattening, the back wall of the skull being very vertical, so that the outline of the norma lateralis is rather cuboidal. The length-height index indicates marked platycephaly, and the breadth-height index falls as low as 83·8, the lowest figure in the series. The outline of the norma occipitalis is less pentagonal and more cuboidal than that of the Acharole skull, the vertex and base being more parallel to one another, and reminding one of the description of the *Dissentis* type of skull in this respect.

The facial bones and jaw are more massive than those of the Acharole skull, but the outline and proportions are quite similar; the nasal aperture is, however, narrower, the index falling several units lower.

IV. Skull from Juniper Green, Midlothian.

This skull, also described in *Crania Britannica*, was recovered from a cist along with a beaker urn. It is also preserved in the National Museum of Antiquities, and I here give a number of measurements not included in the original description. It is the skull of a male over fifty years of age, and is specially heavy. It is, however, smaller in all its proportions than the last, and is less platycephalic. In all other respects it has the same form—but the face is rather longer and narrower, and the nasal aperture is remarkably narrow for a skull of this type. The cephalic index is 82, and the outline of the norma verticalis is rather narrower in the frontal region than the Acharole skull. It approaches thus, a little more than that specimen, the *latus* variety of the *sphenoid* type of Sergi.

The side walls of the skull are flat and "ill-filled," and there is the same sagittal elevation as seen in the skulls already described.

In a careful and valuable paper[1] Dr Alexander Low, Demonstrator of Anatomy in the University of Aberdeen, has recently described ten short cist skulls preserved in the Anatomical Museum of the University. All save one of these belonged to the same general type—nine had high brachycephalic indices, and corresponded very closely with my Acharole cranium. The tenth was dolichocephalic. Six out of the series were found with beaker urns: and for a description of these, abstracted from his detailed paper, I am indebted to him, as well as for the figures of the skulls.

DESCRIPTION OF SIX SKULLS FOUND WITH URNS OF THE BEAKER CLASS IN ABERDEENSHIRE. By ALEXANDER LOW, M.A. M.B., C.M.

V. Parkhill Cist, Aberdeenshire—(A)

This cist was opened in 1867 in making a railway cutting at Parkhill. Covering the bones was a thin layer of matted substance which proved to be largely made up of hair. Associated with the skeleton was a beaker urn.

The skeleton was that of an adult male beyond middle life. The bones of the extremities are generally short and stout, with well marked muscular impressions. There is some degree of platymery of the femur, and a moderate salience of the linea aspera. The stature could not have been more than 5 feet 2 inches.

Skull. The cranium is fairly capacious, with a capacity of 1450 cc. of mustard seed.

[1] *Proc. of the Anatom. and Anthrop. Soc. of the Univ. of Aberdeen*, 1902-1904.

Norma lateralis (fig. 11).—The nasion is somewhat depressed, and the glabella and supraorbital ridges fairly prominent. The vault is high, rising up in the frontal region with a uniform steep curve to the bregma; behind this there is some flattening, and then the postero-parietal passes down with a similar steep curve to the lambda. At that point there is a distinct step produced by the occipital jutting backwards. The occipital pole does not, however, project as a whole.

Norma verticalis (fig. 12).—The cranium is broadly ovoid (*Sphenoides tetragonus*, Sergi.—T.H.B.). The cranial index is 85. There is flattening behind the bregma, with a gentle slope out to the parietal eminences. The glabella and supraorbital ridges enter into this view, while the zygomatic arches are concealed.

Norma occipitalis (fig. 14).—The outline approaches the pentagonoid: the greatest width is high up on the parietals, and the sides are "full filled." The parieto-occipital suture is very elaborate, and in it is a chain of no less than twelve distinct Wormian bones; one of the largest of them is situated in the middle line at the lambda.

Norma facialis (fig. 13).—The face is very broad and square looking, the total facial index being 76, and the minimum frontal diameter practically the same as the bigonial.

VI. Parkhill Cist, Aberdeenshire—(B).

The cist, which was discovered in 1881, contained the skeleton of a male much broken, and a beaker urn.

The only part of the skull preserved is the vault, a piece of the superior maxilla and the right half of the body of the lower jaw. Measurements of the cranium yield a cephalic index of 87·4. The glabella and supraorbital ridges are prominent. The occipital pole does not project beyond the mean when the glabello-inial line is horizontal.

The stature of the individual, calculated from the length of the femora (R. 463 L. 472), must have been about 5 feet 7 inches.

VII. Stoneywood Cist, Aberdeenshire.

This interment was opened in 1866. The cist contained a complete urn of the beaker class, and the skeleton of an adult male.

Skull.—The specimen is incomplete, the parietal region on the right side being broken and the right half of the lower jaw wanting. The skull, though that of a male, is rather delicate, and has its muscular impressions faintly developed. It has an approximate capacity of 1420 c.c. of mustard seed.

Norma lateralis (fig. 18).—The glabella and supraciliary ridges are not prominent, and the nasal depression is slight. There is no falling in at the ophryon, the frontal eminences being slightly developed, and the frontal arc passing up with a uniform steep curve. The parietal curves downwards vary sharply just at the obelion. There is no projection of the occipital pole.

Norma verticalis.—The great relative breadth is seen in this view, the index being 92·3.

Norma occipitalis.—This is high, and forms a somewhat rounded pentagonal, with the greatest breadth high up on the parietal bones.

Norma facialis.—The face is low and broad, while the malar bones are not prominent. There is a complete absence of prognathism. The orbits are microseme, and the nasal aperture has a breadth so great as to be almost platyrhine.



Fig. 11.

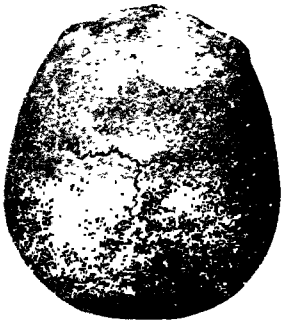


Fig. 12.



Fig. 13.

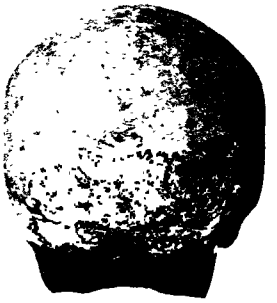


Fig. 14.

Figs. 11–14. Skull from Cist at Parkhill, Aberdeenshire (A).

Stature.—The femur measures 423, and the humerus 297 mm. The stature calculated from the length of the femur, would have been only just 5 feet 1 inch.

VIII. Auchindoir Cist, Aberdeenshire.

This cist was observed in 1857 at Ord, Auchindoir. It contained an urn of the beaker type. The skeleton is very beautiful and almost complete, and belonged to an adult male.

Skull.—The sagittal suture and lower parts of the coronal suture are obliterated. The cubic capacity is 1350 cc.

Norma lateralis.—The glabella having been broken, revealed two large frontal sinuses. There is hollowing at the ophryon, and there the frontal ascends with a uniform and high curve. Behind the obelion there is a sudden flattening of the postero-parietal region. There is no projection of the occipital pole. The skull is extremely high, the vertical index being 81·4. [Notwithstanding, seeing that the height is substantially less than the width, the breadth-height index is below 100, being 95·7. It is thus a "wide low" skull when height and width are compared.—T.H.B.]

Norma verticalis (fig. 15).—The shape of the skull is an extremely broad oval [again *Sphenoides tetragonus* of *Sergi*.—T.H.B.], the index being 85. There is slight flattening of the parietals, with a tendency to "keeling."

Norma occipitalis.—The outline is a broad pentagon with rounded angles. The parietal eminences are high up, and the maximum breadth is between them. The skull is of the "ill filled" type.

Norma facialis (fig. 16).—This skull tends more towards prognathism than the others described. The face is short and relatively very broad, the breadth being slightly greater than the length. The forehead is narrow and the angles of the jaw far apart. The orbits are microseme, and the nasal aperture mesorhine.

Bones of extremities.—The *humeri* are of medium length, the muscular impressions well marked, and the internal condyles very prominent. The *radius* has the normal proportion to length of humerus. The *femora* are stout muscular-looking bones of medium length (R. 458, L. 466); there is distinct flattening below the trochanters. The *tibiæ* are relatively short, and show distinct lateral flattening (platycnemia).

The *stature* was estimated at 5 feet 6 inches.

These four skulls described by Dr Low, the Acharole and Lesmurdie skulls, form a group of very uniform characters. They are all very brachycephalous, and with a few minor differences, the same description might be given for each.—T.H.B.

IX. Clinterty Cist, Aberdeenshire.

This cist was opened in 1897 at Clinterty, Kinellar, Aberdeenshire. It contained part of a male skeleton—an urn of the "beaker" type; a bone ring; flint arrow-heads, and a small flint axe or boter.

Skull.—The skull is much broken. It is that of a male; the circumference is approximately 528 mm.; the cranial index is 84·3. The nasal depression

and the glabella are fairly well developed. The frontal arc, as in the other skulls, is slightly longer than the parietal: still the bregma is well forward, the frontal arc being high.

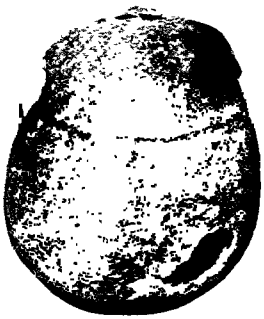


Fig. 15.



Fig. 16.

Skull from Cist at Auchindoir, Aberdeenshire.



Fig. 17. Skull from Cist at Persley, Aberdeenshire.



Fig. 18. Skull from Cist at Stoneywood, Aberdeenshire.

The norma verticalis is broadly oval—the zygomatic arches are hidden from view; the norma occipitalis has a distinctly "ill-filled" appearance. The nasal aperture is relatively wide, the nasal index approaching the platyrhine group.

The *stature* is calculated as about 5 feet 1 inch.

X. Persley Cist, Aberdeenshire.

This cist was discovered at Persley quarry in 1868. It contained an urn of the "beaker" type and two flint knives or scrapers with a skeleton of an adult male.

Skull.—The specimen is imperfect, having but part of the left side of the calvaria. It has approximately a capacity of 1500 cc.

Norma lateralis (fig. 17).—This view is striking on account of the apparent great height. The real height is, however, diminished by the rapid way in which the occipital bone shelves inwards and forwards below the inion. The glabella and supraorbital ridges are prominent and overhanging. The general outline is high, and so rounded as to form practically one segment of a circle. The parietal arc is in this skull 14 mm. longer than the frontal. The vertex is 35 mm. behind the bregma.

Norma verticalis.—The massive supraorbital ridges and external angular processes enter into this view, but the zygomatic arches, if they had been entire, would have been concealed. From the vertex the surfaces of the skull descend uniformly and rapidly in all directions. The maximum breadth is well down on the parietals and is relatively great, the index being 85·1.

Norma occipitalis.—The side walls are well filled; and the point of greatest width is near the squamous sutures.

Norma facialis.—The brows are "beetling," and the face wide and square looking. The malar bones are not prominent. The gnathnic index is low (90·6). The orbits are microseme, and the nasal aperture almost platyrhine.

This skull differs from the others in respect that the vault is raised, as it were, to a summit from which the surface slopes down uniformly in every direction. It recalls the shape named by Sergi *Chomatocephalus* —which is a sub-variety of his sphenoid class.—T.H.B.

XI. Fyrish Cist, Evantown, Ross-shire.[1]

The cranium was found in a cist with a beaker in 1865. It belonged to a male in the decline of life. The skull is brachycephalic and rounded in form. The various regions of the cranium are well proportioned. It is not truncated posteriorly, and does not exhibit the parieto-occipital flattening which many of the skulls from the ancient short cists possess. The glabella and supraorbital ridges are strongly marked. The nasal bones curve slightly upwards. There is no prognathism. The capacity is 1605 cc., the cranial index is 80·8, the height index 71. The frontal arc is slightly less than the parietal.

[1] *Proc. Soc. Antiq. Scot.*, vol. vi. p. 266, 1865, William Turner, M.B., now Sir William Turner, K.C.B.

Considering this group of eleven skulls, one is struck by its uniformity. Ten of them have the very high average index of 85·39, and with minor differences they are all identical in type: they are all sphenoid in Sergi's nomenclature. The eleventh, from Fyrish, has a lower index 80·8, and like the youthful Dunrobin skull it does not show the marked degree of parieto-occipital flattening, which is a marked characteristic of the more brachycephalic specimens.

When the short cist skulls recovered in Scotland are grouped without any discrimination in terms of the associated fictilia, the same uniformity does not prevail. In Dr Low's series there is one dolichocephalic skull out of ten; and in Sir William Turner's series of seventeen, only twelve come into the brachycephalic category, with an average cephalic index of 81·4.

The same want of uniformity is seen in the English Round Barrow crania taken as a whole, and I cannot yet certainly tell whether a segregation in terms of the ceramic will bring out a more even series.

I know of seventeen recorded cases from the Round Barrows. Of these eleven are brachycephalic, some with very high indices; three fall just below the conventional limit of brachycephaly; while three are dolichocephalic.

The English series is thus less uniform than the Scottish, but I feel less confidence regarding the association than I do in the case of the short cist skulls. It is obvious that there is room for error of association, in the exploration of cistless barrows with many interments, especially if these are in the same grave and successive.

Certain of these Round Barrow skulls have not been recorded, others want further examination and identification, so that I must meantime content myself with the record of the fully worked out Scottish examples, reserving a discussion of the southern series for a future occasion.

A study of descriptions of the Round Barrow crania shows that, exclusive of the dolichocephalic specimens, there are three main types.

(1) A sub-brachycephalic type with prominent glabella and supra-

orbital ridges; prominent arched nose, with its root deeply insunk: large mouth; heavy lower jaw and strong chin. The shape is a broadish oval: the occipital region is somewhat flattened, but there is no distinct or pronounced parieto-occipital flattening. The norma occipitalis is well filled—the greatest breadth is parietal, and rather far back. These traits correspond rather closely with the *Borreby* type of skull, and again with the *Sion* type of His and Rutimeyer, and the form has very generally been held, as it was by Davis and Thurnam, to be the typical Round Barrow cranium.

(2) There is a type with a higher cephalic index, sometimes very brachycephalous, with weak or moderately developed, but sometimes even rather prominent supraorbital ridges. The shape is sphenoid in Sergi's nomenclature; the breadth-height index is low, and the skull is often markedly platycephalous; there is marked parieto-occipital flattening: and the face is low and broad.

This type is represented nearly pure in our Scottish beaker series, and it exactly corresponds with the *Dissentis* type of His and Rütimeyer.

(3) There is a type which has the higher index and other characters of the second type, with the longer face and stronger jaws of the first.

These may well be individual variations within the race type; but it is a fact of possible significance, that the series of skulls from short cists containing beaker urns are practically uniform in adhering closely to the second type.

Many of the individuals in the Scottish group were of low or moderate stature, and thus the beaker interments in Scotland represent in this respect also the *Alpine type* of Ripley, and it is to be specially noted that this series is not consistent with the generally accepted proposition that the Bronze Age immigrants were a uniformly tall people.

Postscriptum.—Since this paper was sent to press I have been informed by Dr Low that he has examined the remains from another short cist with a beaker urn, discovered in Aberdeenshire. A description will be published later, but he permits me to say that in type the skull agrees exactly with those described above.

IX.

NOTICE OF A PISCINA IN CAVERS HOUSE, ROXBURGHSHIRE.

By Capt. J. H. ANDERSON, F.S.A. Scot.

About fifteen years ago it was found necessary to carry out extensive repairs and alterations in Cavers House. Amongst other alterations was the removal of a long arched vault running the entire length of the house east and west, close along the south wall, which is the oldest part of the house, the east and west walls being 14 feet thick and the south 8 feet, besides being pierced by two arrow slits. The vault was in many ways similar in construction to those which may still be seen in "Queen Mary's house" at Jedburgh and at Ferniehurst. It was certainly constructed at a date subsequent to the building of the original house, and probably as a support to the building above. The arch might have been built from underneath, as the key-stones were small, badly shaped, and apparently only kept in position by means of the cementing mortar.

The removal of this vault disclosed the piscina described in this notice and shown in fig. 1. It was embedded in the south wall, close to the south-east angle of the house, and to all appearance was in its original position.

It is constructed of eight pieces of freestone, rough and still exhibiting the marks of the tools. In height it is about 40 inches, and 20 inches in greatest breadth.

It was originally ornamented on the outside by a plain circular moulding, which was most unfortunately chiselled off by an ignorant workman, to make it flush with the wall.

The interior of the niche is arranged with the basin on the left-hand side—the right-hand side (facing the piscina) being left as a table or shelf

The base, which projects about 3 inches from the wall, in two segments of a circle, finishes off downwards, representing practically two cones, with the bases upwards and touching each other.

These cones are ornamented by two deep rounded grooves, and are finished off downwards by plain and simple knots, the ends of which

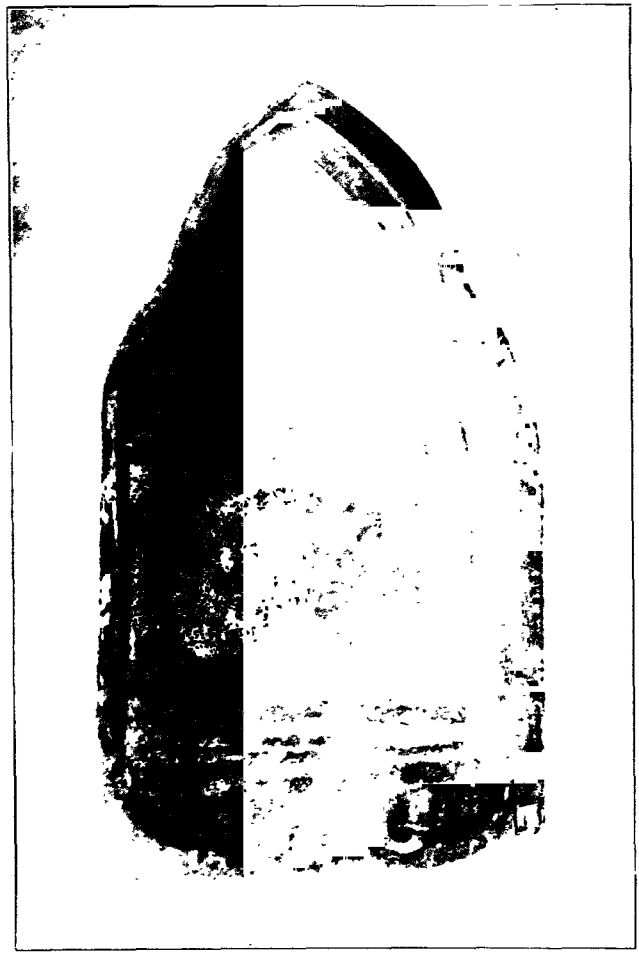


Fig. 1. Pisema in Cavers House.

meet. The knot on the left-hand side is larger and lower than that on the right.

X.

NOTICE OF ANCIENT CHRISTIAN GRAVES ON THE FARM OF WOODEND, IN STENTON PARISH. By JAMES T. RICHARDSON, M.D.

By invitation of Mr Hamilton-Ogilvy, I had the opportunity of examining some ancient interments discovered in October 1904 at the farm of Woodend, on his estate of Biel, East Lothian. The locality was a piece of arable land on the top of a slight declivity sloping down to the west end of Presmennan Loch, in the parish of Stenton, at the foot of the Lammermuir Hills. The graves were met with in the process of trenching some potato pits, in a spot where, on previous occasions, the plough had struck what was then thought to be merely an outcrop of surface rock, but which the greater depth now reached by the spade showed to be the covering slabs of ancient graves.

On notification being given to the proprietor, he suggested that I should make a more thorough investigation of the ground, and on viewing the place I found the interments already discovered to be eight in number, a few feet to several yards apart, and all lying east and west. They had been considerably broken up, but I had fortunately observed indications of another which had not been disturbed. On digging down a short distance three slabs of red trap rock were uncovered, beneath which was a compact mass of large gravel and earth. This was carefully removed, disclosing a cist of the long type, 5 feet in length, 1½ feet in width, and 1 foot or more in depth, with its long axis east and west, and having its sides and ends formed of a number of upright flat stones. The skeleton it contained, which appeared to be that of a female of middle age, was fairly intact: the body had been laid on its back on a flooring of thin grey shale, with the head at the west end, slightly raised and bent forward on the chest: the arms by the sides, with the hands placed under the hips. The teeth were in a healthy condition, and not ground flat, the molars being only slightly grooved on the crown. Nothing was found along with this interment. The general character of these burials indicated that they belonged to the early Christian period.

XI.

REPORT ON THE SOCIETY'S EXCAVATION OF ROUGH CASTLE ON THE ANTONINE VALLUM. BY MUNGO BUCHANAN, C.M.S.A. SCOT.; INTRODUCTORY HISTORY BY DR DAVID CHRISTISON: DESCRIPTION OF THE RELICS BY DR JOSEPH ANDERSON. (PLATES I., II.)

I. HISTORY.

As the funds of the Society had been considerably encroached upon in defraying the expenses of excavating Roman sites for a period of eight years, the Council instituted in 1902 a subscription among the Fellows and others for the purpose of continuing that line of investigation, and ample funds were thus obtained for the excavation of Rough Castle, leaving a considerable balance in our favour.

Leave having been freely granted by Mr Forbes of Callander and the Very Rev. Dr J. C. Russell, proprietors of the ground, the work began early in March, and was continued, not without some interruption from bad weather, till October 1903. Several members of the Council kept up a general superintendence, Mr Thomas Ross's great experience being again available in directing the work. Mr Mungo Buchanan once more gave his valuable services in taking the plans, devoting every moment he could spare from his own business to a careful study of the complex structures that were revealed: and Mr Alex. Mackie, who had served us already so well as Clerk of Works in four excavations of Roman sites, was re-appointed on this occasion.

Position of Rough Castle

According to Robert Stuart's chart in *Caledonia Romana*, Rough Castle was the thirteenth fort on the line of the Vallum counting from the west, and the seventh counting from the east. Evident remains of nine forts are still to be seen to the west, but nothing exists above ground of the six to the east. Castlecary, the nearest fort on the Vallum, lies 3½ miles westward of Rough Castle: the station at Camelon,

situated 1100 yards in front of the Vallum, is 1½ miles to the north-east; and the town of Falkirk lies 2½ miles to the east.

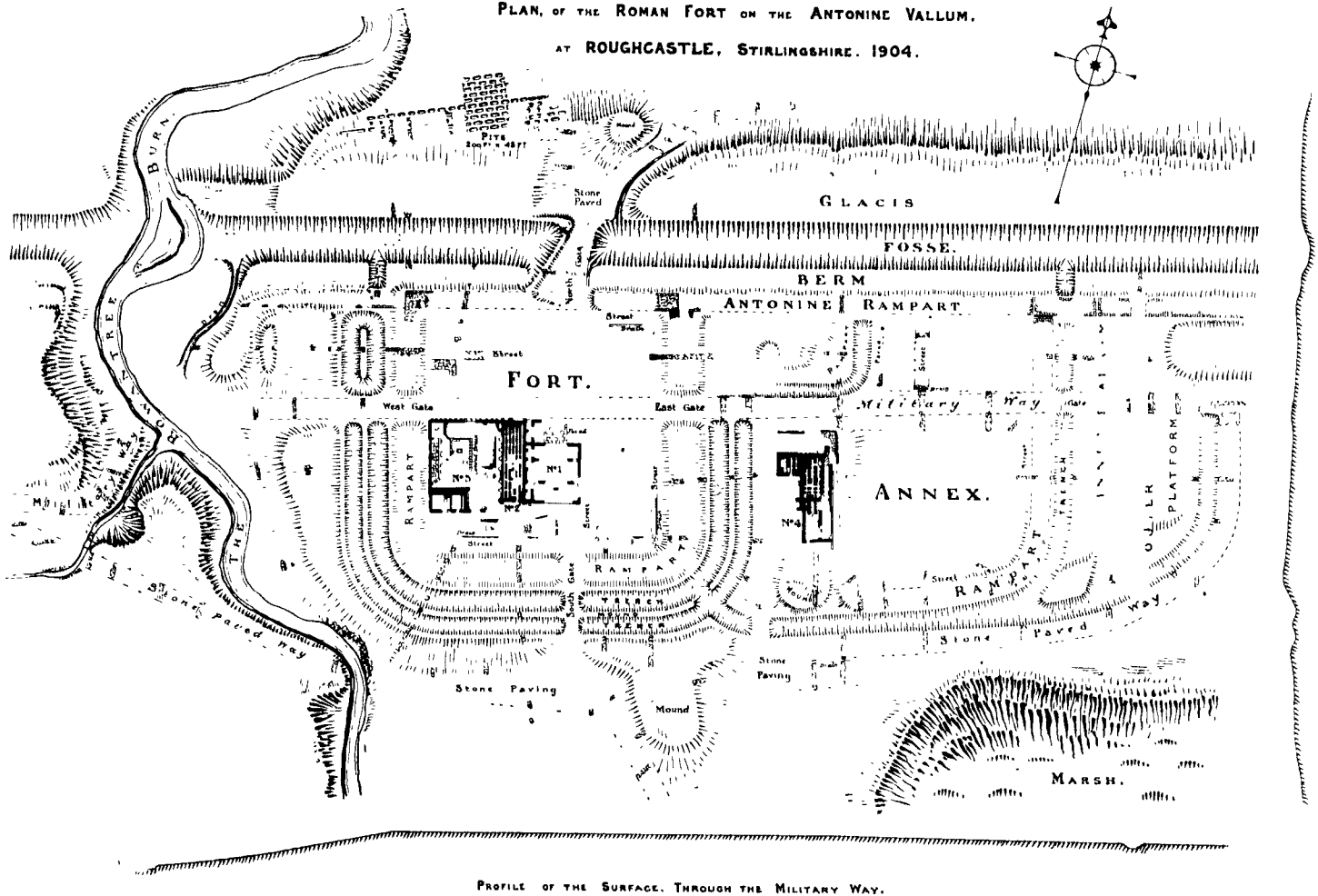
The fort, consisting of a main work and an annex (fig. 1), stands on a rough boggy bit of moorland, overgrown with trees, near the west end of an extensive strip of wood that stretches nearly a mile eastward towards Falkirk. The site itself, and the ground to the south and east, is nearly level, but northward there is a gentle descent to the bottom of the valley, and to the west a rather steep declivity, about 40 feet in height, falls on the Rowantree Burn. This slope was strongly fortified down to the burn, no doubt to command a water supply, which was very necessary, as there was apparently no well within the fort. The north front, formed by the Antonine Vallum, was very strong, and the other three sides of the main work, as well as the east end of the annex, were also strongly fortified; but the south front of the annex was less protected by art, probably because the marshy ground in front, a considerable obstacle in the present day, was still more of an obstruction formerly. Although a stone bottoming, similar to that of the rampart of the Vallum, extended round the rampart of the main fort also, there was no trace of stone revetments, and the fort must be classed as an earthwork, notwithstanding the statement by some of the early observers that it was of stone.

Former Notices.

The early notices of Rough Castle are brief, and contradictory. The earliest is in an anonymous letter describing an excursion to the west of Edinburgh in 1697 (*Historical MSS. Com.* XIII., App. ii., 57).

"About two miles from the Maiden Castle is a large square work of stone with a double ditch about it. The common people hereabouts call it *Castle Ruff*. Here are the ruins of several stone buildings. About the middle of the square is an overture thro which shepherd boys creep into a Vault underground."

Thus the very earliest informant calls it a work of stone, and mentions a vault, of which, however, we could find no sign.



PROFILE OF THE SURFACE, THROUGH THE FORT

Fig 1

Sir John Sibbald (*Historical Inquiries*, 1707, p. 30) merely says, "At the Rowen Tree Burn Head is a great Fort."

Alexander Gordon (*Itinerarium Septentrionale* 1726, p. 59, plate xxv.) states that on the east bank of Roundtree Burn "are the distinct vestiges of a vast Roman Fort upon the Wall, called Rough Castle, which for intireness and magnificence exceeds any that are to be seen on the whole Track from sea to sea. Here I spent several hours, taking minutely its dimensions, and an eye Draught of it on the spot, as indeed I did of all the others. One circumstance is very remarkable:

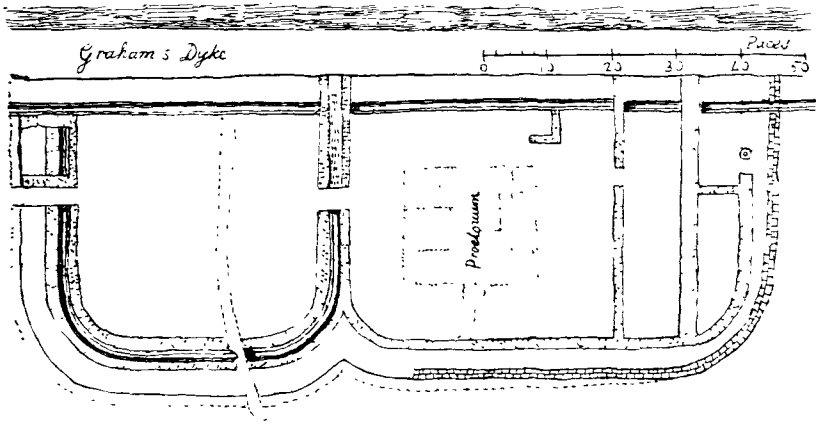


Fig. 2. Reduced Plan of Rough Castle by Alexander Gordon, published 1726

namely, that the same Freestone Wall, already mentioned (*at Grimesdyke, a short distance westward*), seems by its foundation here to have surrounded the whole Castellum. I also remarked that the great Ditch of Grimes Dyke is part of its Fortification northwards'

Gordon's plan (fig. 2) is by far the best of all his plans of Roman forts, but it does not show the freestone wall he speaks of as surrounding the fort. Something like it is represented at the annex, but as it is outside the trenches, and precisely in the position of the "paved road" in Mr Buchanan's plan, it is probably to be identified with that. Gordon places the ramparts of the main fort between the two trenches

instead of in their rear, and there are other errors in the details of the fortification. He must also have made some mistake with his scale, as it would require a pace above 6 feet in length to bring his measurements near the truth.

It is singular also that he represents a well-defined "Prætorium," divided into compartments, in the centre of the annex, where we found no corresponding building, and he shows no building in the main fort, where we found extensive remains.

Horsley *Britannia Romana*, 1732, p. 173) describes the descent on the west to the "Rowintree-burn" as gentle, and the ground as now wet

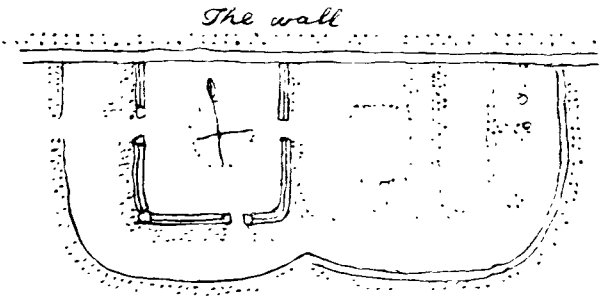


Fig. 3. Plan of Rough Castle by William Horsley, published 1732.

and the fort overgrown with heath. He also says that "No ruins are visible either within or without the ramparts, which are lower than I should have expected from Mr Gordon's account, but I have endeavoured to give the best notice of the walls and contrivances in the draught."

Horsley's plan (fig. 3) is very small and wants a scale. In a general way it is tolerably good, and represents the ramparts and trenches more correctly than Gordon's. Although Horsley says that no ruins were visible, his plan shows in the annex a rectangular enclosed space with an approach from the south, much as Gordon shows his "Prætorium," but nearer the east side, and with its greatest length from north to south instead of from east to west. Horsley also gives what may be presumed

to be the paved road outside, but makes it take a wide sweep beyond the trenches, which is certainly an error.

Maitland (*The History and Antiquities of Scotland*, i. 173) briefly and inadequately describes Rough Castle as "a strong fort about 90 paces square, inclosed with a double rampart and ditch with obtuse angles."

Roy (*The Military Antiquities of the Romans in North Britain*, p. 161, pl. xxxv.), whose survey was made in 1755, calls Rough

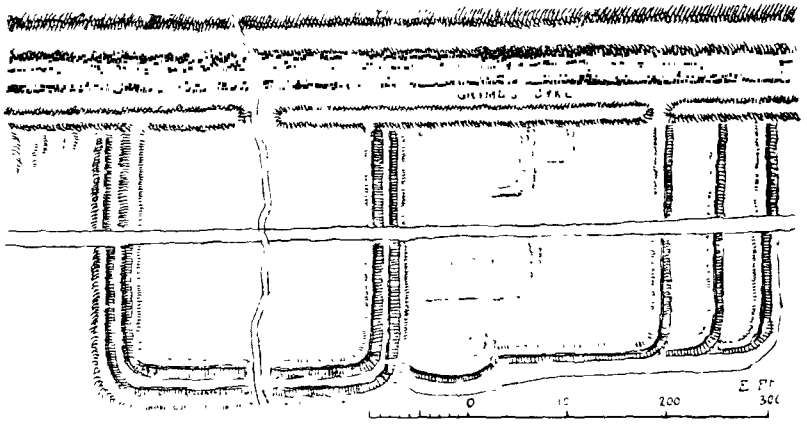


Fig. 4. Reduced Plan of Rough Castle by General Roy, 1755.

Castle the last or easternmost of the forts now existing, and states that it "consists of two divisions, whereof the principal seems to have been that towards the west, as it is surrounded with a triple envelope. The eastern was probably an addition for lodging a greater body of troops, when on some particular emergency the Wall was repaired, and within it some foundations may be seen." His plan (fig. 4) seems to show a "triple envelope" of ramparts, separated by two trenches in the main fort. Faint indications are also shown of the additional fortifications, which were fully opened up by us afterwards, on the descent to the burn. The weak defence of a single trench on the south side of the

annex, and its strong eastern flank, protected by three trenches defining and separating two wide platforms, are depicted much as we found them, and the dimensions given are wonderfully accurate, considering that they were taken on the unexcavated site. The vague remains shown in the interior of the annex cannot well be identified with what we uncovered, and the area of the main fort is blank.

The Rev. William Nimmo (*History of Stirlingshire*, 1777, p. 8) says, "Rough Castle, though all overgrown with heath, from whence it probably drives its present name, yet the plan of it, which is square, is quite distinct. But nothing remarkable is to be seen amongst the ruins of the station: it hath been surrounded with a double ditch and rampart. Mr Gordon observed the foundations of a freestone wall, but there is not at present any appearance of stonework about it, except in the middle, where the Prætorium stood, the stones having been carried off to build houses in the neighbourhood."

The *Old Statistical Account of Scotland*, 1797, only mentions Rough Castle, along with Castlecary and Camelon, as "the most remarkable forts or stations in the neighbourhood," and states that the sites of the two former are still to be seen.

On the other hand, the *New Statistical Account*, 1845, makes the extraordinary statement that "no vestige of Rough Castle can be discovered: and its situation is only marked by a slight elevation of the ground."

Robert Stuart (*Caledonia Romana*, 1852, p. 354) describes the mounds of the dilapidated ramparts as still quite distinct, but "so densely covered with young trees and brushwood that it is with considerable difficulty any part of the general plan can be distinguished. It appears to have consisted originally of two compartments." No vestiges of the traces of masonry in the east enclosure seen by Gordon, or of the Prætorium mentioned by Nimmo, could be seen by Stuart. "Three or four hundred yards south of it, in 1843, was ploughed up an altar, now in Mr John Buchanan's collection, pl. xv. 5."

The Ordnance plan (fig. 5), taken by Lt.-Col. O. E. Ruck, R.E., published in 1897, surpasses all its predecessors, and is valuable as

showing how near a careful surface-plan of the fortifications of a Roman fort may come to what prove to be the main facts on excavation. There is hardly one of the ramparts, trenches, etc., subsequently revealed, which is not indicated in the plan. The interior is blank, as we found it to be on the surface.

The Antonine Wall Report, Glasgow Archæological Society, 1899. In the course of the extensive investigation by a Committee of the Glasgow Archæological Society from 1890 to 1893, of the plan and structure of the Vallum, three sections were made through the ramparts of Rough

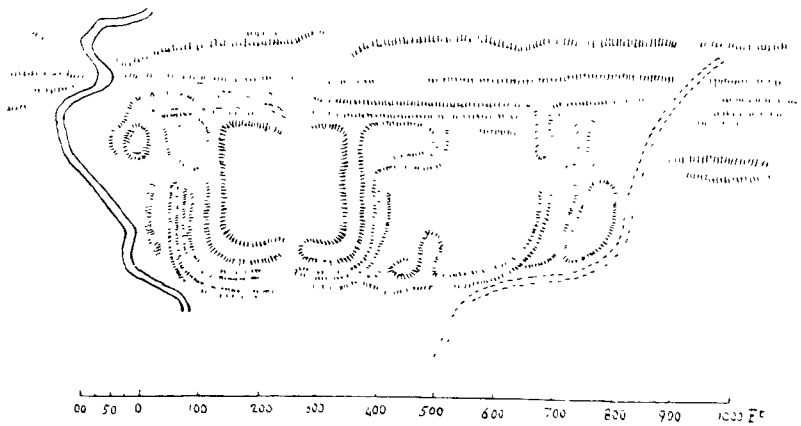


Fig. 5. Ordnance Plan, by Lieut.-Col. O. E. Ruck, R.E.

Castle, two in the Vallum, which was its northern defence, and one through its own rampart to the west (pp. 115–119, and Plate V.).

These excavations were the first ever made at Rough Castle, as far as is known, and contributed greatly to the confirmation of the *cespititious* character of the rampart of the Vallum and to our knowledge of its precise structure. The excavation of Rough Castle itself did not fall within the scope of the inquiry, but the Committee drew attention to the importance of a full investigation, such as so soon afterwards it was the privilege of our Society to carry out, the results of which will now be described by Mr Buchanan.

II. Report on the Excavation. By Mungo Buchanan, C.M.S.A. Scot.

In the plan of Rough Castle there is a great resemblance to that of the neighbouring fort on the west. Like Castlecary, it is built on the east bank of a stream, on elevated ground and close to it. It is likewise extended on the east by an annex of similar form. Its northern defence is the Antonine Vallum, and along the south front there lies a wide stretch of marshy ground. Here, however, comparison ends, for the strong stone-built walls of Castlecary are not repeated at Rough Castle, and, whereas the fortifications of the former are almost entirely obliterated, the latter still retains its earthworks in splendid preservation. Burial in a coppice, the remains of an ancient forest, and the cover afforded nearly everywhere by a luxuriant undergrowth, may partly account for the preservation of these works, but the main cause has been the great care bestowed upon their construction.

To avoid confusion, only the positions of the principal excavations are shown on the plan (fig. 1).

These, with many more exploratory cuttings, were excavated through the varying strata of forced soil, down to the original natural surface, and carefully examined and noted during the process.

General Description of the Fortifications.

The main fort is square in plan, having the Antonine rampart as its base, and the other three sides defended by a rampart and two trenches, rounded at the corners where the east and west sides join the south.

The interior dimensions are 223 feet each way, measuring between the inner margins of the stone foundations of the ramparts, giving an area of nearly 1¼ acres. By the extension of the earthen ramparts to the interior, this area is reduced to little over an acre.

Each rampart is pierced by a gateway on a level with the surface of the interior. The east and west gates are in line with the military way

which crosses the fort, dividing it into two unequal parts, the part on the south being nearly twice as large as that on the north. The north and south gates, also, are directly opposite each other, and are placed more to the east than the true centre of the ramparts.

On the east the fort is supplemented by an annex, which differs considerably from it in construction. It is nearly a square of 250 feet within the defences, but the south side is inclined slightly inward, with a bold rounded corner on the south-east, reducing the width at this part to about 230 feet.

Including a portion where one of the trenches of the fort is omitted, the area is about $1\frac{1}{2}$ acres. It has evidently been surrounded by a rampart, now all levelled, and an accompanying trench. Towards the east the latter branches into three widely separated trenches, the intervening spaces being formed into large platforms.

I. Defences of the Main Fort.

A. The Antonine Rampart.

The Antonine rampart and trench (figs. 1 and 6) form the north defence of the fort and annex. The rampart appears to have been purposely enlarged, within the compass of the fortifications, by additions externally and internally. The foundation (fig. 7) is of stone, 15 feet wide, bordered with squared kerbstones averaging 15 inches long by 12 broad and 9 deep, placed close together and firmly bedded.

The superstructure in all the cuttings showed the stratified nature of its formation very distinctly,—the apparent addition in width being indicated by the presence of laminæ beyond the stone foundation, generally in continuation of the inner layerings, but occasionally separated from them, and always tapering downward on the outer edge (fig. 6).

About 200 feet of the inner kerb of rampart was uncovered at the east end, and exposed in that length 4 culverts passing through it. The channels of the culverts are 1 foot square, and are constructed of large boulders about 2 feet by 1 foot, placed close together. On the margins they rest for about 3 feet on flat stone bottoming, and for the



Fig. 6. The Antonine Vallum at Rough Castle, looking west.

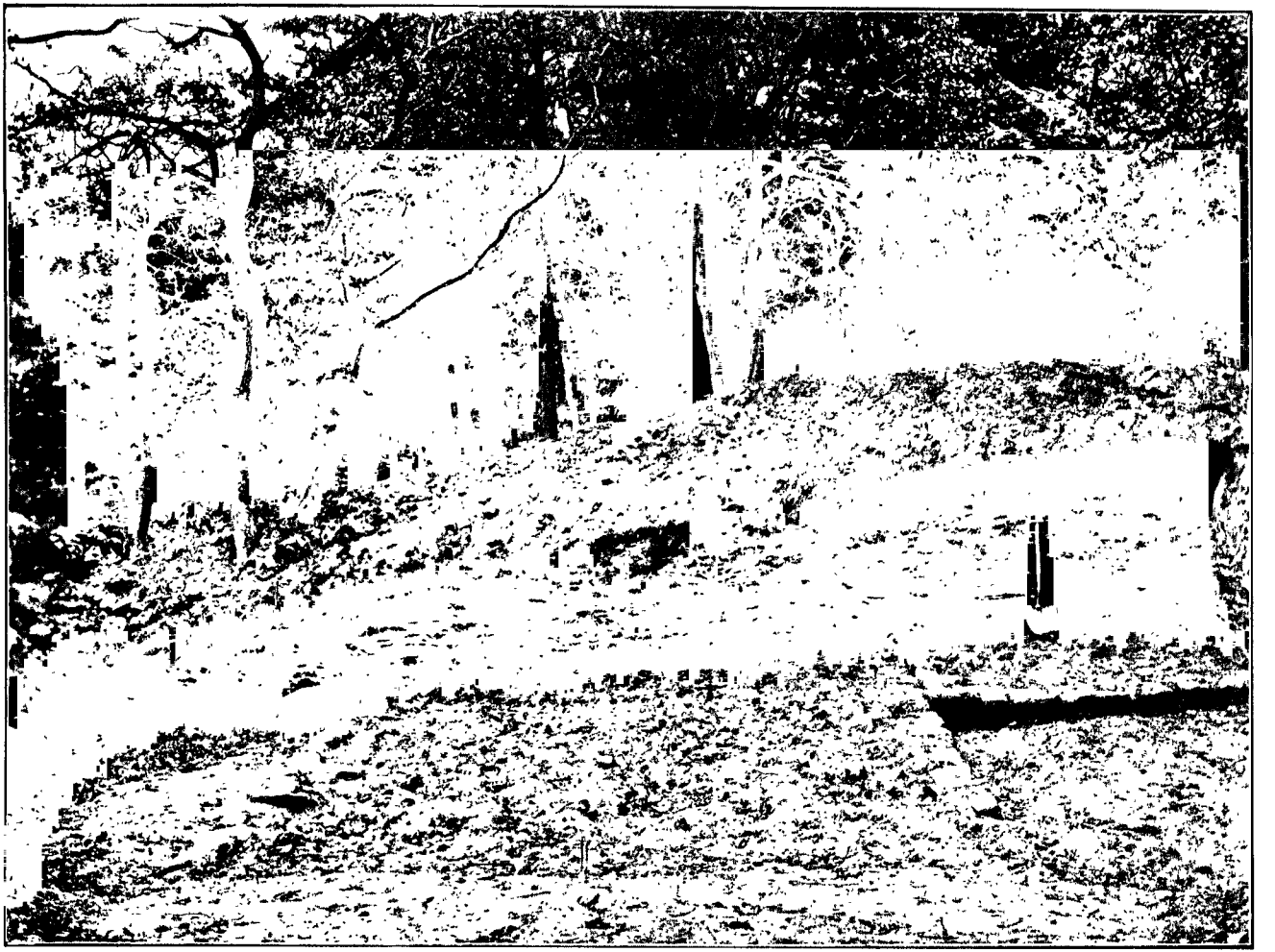


Fig. 7. Junction of East Rampart of Rough Castle Fort with the Antonine Vallum, looking east.

remainder of their length on the natural surface. They are covered with large natural stones, averaging 30 inches long, 15 broad, and 8 deep (fig. 8).

The fosse (fig. 6) in front of the rampart is 40 feet wide and not less than 14 feet deep, and has been strengthened along the margins with



Fig. 8. Culvert passing under Rampart.

stones. The berm next the fort is about 27 feet wide, measuring up to the stone foundation; but as the rampart extends beyond the foundation, the width is reduced to about 20 feet.

The glacis is all forced soil, from 3 to 4 feet deep, averaging about 75 feet in breadth, nearly flat on the surface, with a quick taper downward on the north. Along the edge of the fosse large stones are placed,

occasionally appearing in heaps, as in the section (Plate I.). These stones are all natural boulders ; there is no indication of lamination in the body of the glacis.

A paved roadway is formed across the fosse at the north gateway of the fort, having a gentle slope to the opposite side. It is about 50 feet wide next the rampart, and 20 feet wide in line with the inner margin of the glacis. A deep cutting made by us through its centre for the purpose of drainage revealed a soil identical in nature with that of the glacis, and apparently undisturbed, with the exception of a portion on the extreme east edge, which was much darker in colour, and showed a definite line of junction, while it in no way resembled the organic remains common to the fosse.

From the evidence of other cuttings it seemed to be an extension of the width, and originally the road at its exit could have been little more than 10 feet wide, showing that the fosse had probably terminated against the east side of the passage with a square end, instead of being angled as it now is. (See dotted line on plan.) The west side of the passage is very much angled, and along the whole edge is a raised border of stone-pitching, which is carried for fully a foot down the slope of the trench.

The stone-pitching stretches the whole distance between the Antonine rampart and a small narrow mound at the neck of the passage on the north side of the trench (fig. 1). This mound is 10 feet wide, and is supported along the edge of the fosse by a retaining wall 18 inches high of squared stones in two courses, rounded at the corner to join the stone-pitching.

The area in front of the passage is stone-paved, sloping up the glacis to the west, and in the opposite direction sweeps round in the form of a street, to pass between the glacis on the east and a traverse lying before the gateway. This traverse is 70 feet north of the fosse, and in alignment with the angled west side of the passage. It rises about 5 feet above the adjoining street, is all forced soil, showing no lamination, and is stone-pitched along the bottom of the sloping sides.

B. Defensive Pits or Lilia.

100 feet to the west of the traverse, the unexpected discovery was made of a series of defensive pits, as the result of carefully following several indefinite appearances met with, by the trained excavators of the Society.

This unique defence was followed and examined with special care, so as to preserve a full record of its characteristics.

The series of pits extend east and west a length of 200 feet, from close upon the traverse to the brink of the declivity above the burn, and is 48 feet at the widest where entirely exposed. In this width there are ten parallel rows, with the pits arranged obliquely, so that pit and level surface alternate either way.

Each pit is about 7 feet long by 3 feet wide at the surface and 2 feet 6 inches deep, the sides tapering quickly downwards. They are so regular in arrangement that they divide out at 10-feet centres longitudinally, and 5 feet in the opposite direction, with very little variation.

It will be seen from the photographs, figs. 9 and 10, and the section (Plate I.), that the five south rows are covered by the tailing of the glacis. The depth of soil overlying the southmost row is nearly 3 feet, but northward it tapers down to 9 inches in a distance of about 25 feet, and continues at this depth over the other five rows.

As regards the strata of the covering soil, nothing particular was noted in the pits themselves, except that there appeared a few inches of dark soil near the bottom, such as is generally found in trenches; but about halfway between the top of the pit and the surface of the glacis a distinct dividing line was observed. This line varies from $\frac{1}{2}$ to $1\frac{1}{2}$ inches in width, and was almost black with streaks of iron pan through it. The soil under the mark was of a lighter colour than that overlying it. The appearance suggested that additions had been made at different times.

In this soil were many very small pieces of broken pottery, and they were found even near the bottom of the pits. Most of it was of a dark

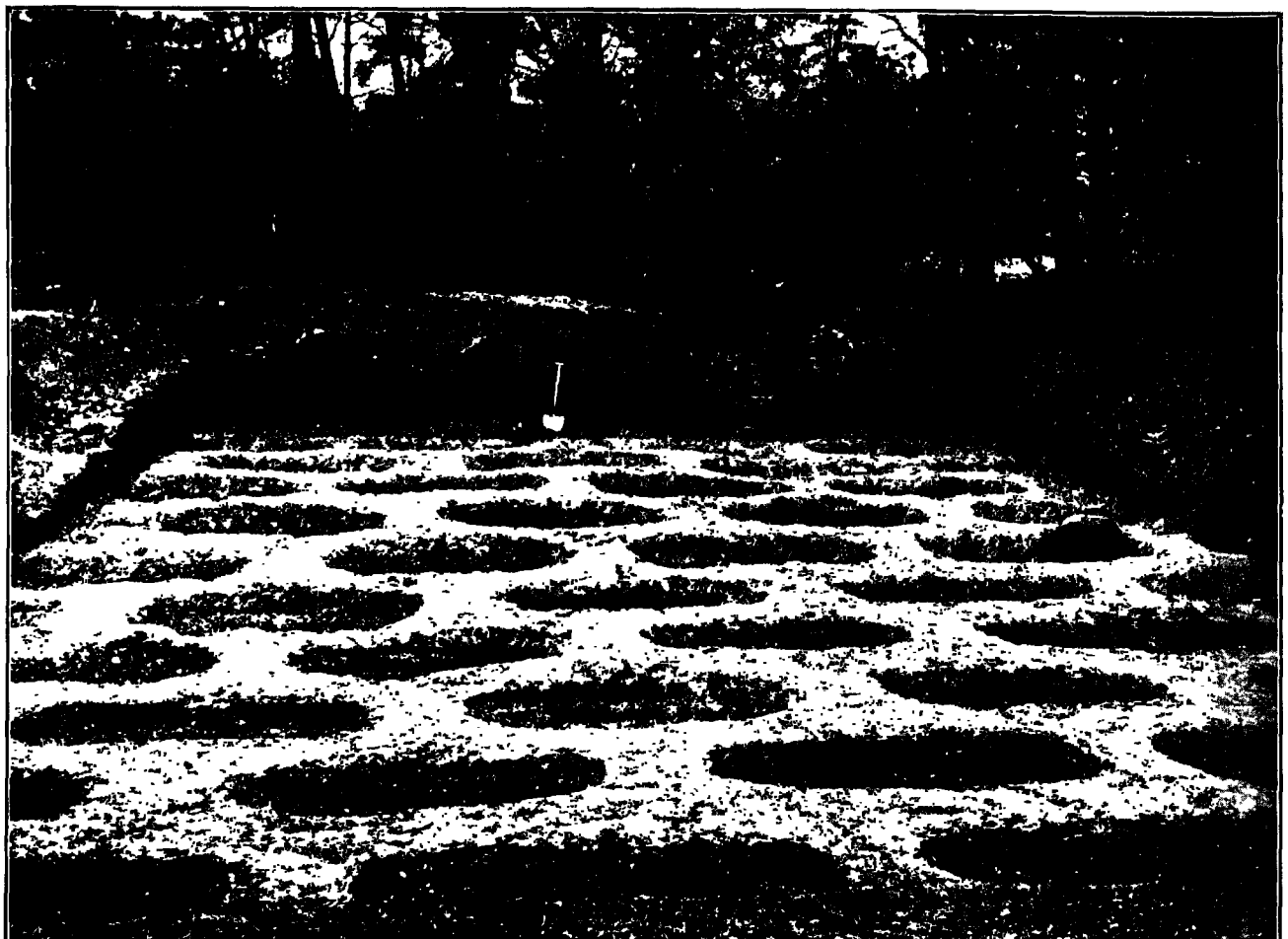


Fig. 9. The Pits (Lilia) to north-west of north gate of Rough Castle Fort.



Fig. 10. The Pits (Lilia) to north-west of the north gate of Rough Castle Fort (looking into them from the east)

lead colour, with a black glaze showing reticulated lines on the outside, but a few fragments were coarser, and of a light grey colour.

It may here be remarked that outside the south gate a similar kind of soil, with pieces of pottery liberally mixed among it, covered a large area, over which in several places stone-paved roadways had been laid. These may have been refuse-heaps, spread out and covered or added to, and when taken in connection with other evidences throughout the fort, point to an alteration of the defences at these parts.

C. The Ramparts.

The foundations of the ramparts of the fort vary to a great extent, and in the superstructure the layers are larger than in the Antonine Vallum. At the junction of the east rampart of the fort with the Antonine Vallum the foundations show distinct separation from one another (fig. 7). That of the fort is 20 feet wide, the outer margins being continued round the end, and stands several inches above the Antonine margin, close to which it is laid, otherwise both foundations at this part are identical in construction. About 40 feet farther south the foundation of the fort is changed; and while the inner margin is still maintained, the outer or east one is omitted, and the stone bottoming is carried out a distance of at least 25 feet, and is continued as a stone-paved surface into the annex adjoining. There is no trench in front of this portion of the rampart.

To the interior beyond the inner margin of the foundation there is a channel, stone-bottomed, 6 inches deep by 6 feet wide. This, again, is bounded inwards by a raised core of stones of about 3 feet in width, which ends upon the edge of a cobble-paved street rising about 9 inches above it. This street is 12 feet wide, runs parallel with the rampart, and has in the centre a drain 12 inches wide and 9 inches deep, made of large stones set on edge, as shown in the section on Plate I.

The arrangement above described is maintained throughout this rampart along the inner margin, but further south it is changed on the outer margin. The two trenches are now in front of it, and the margin facing

them becomes, in accordance, a strong stone revetment, about 7 feet 6 inches wide, built higher where facing the interior, and set back 5 feet from the edge of the inner trench. (See the section on Plate I.)

On the west the foundation of the rampart leaves the Antonine Vallum very similarly to that of the east, and, like it, soon changes, though in a different manner. 40 feet south of the Antonine Vallum the 20-feet stone foundation of the junction becomes the bottom of a channel, on each side of which additional margins are formed, rising 6 inches above it. (See the section, Plate I.) That on the outer side increases the width by 10 feet, and is composed of large rough boulders firmly bedded in clay, while the inner margin at the higher level is of flat stones like paving. The recess made by the raising of the margins gives a strong anchorage to the ramparts, as will be observed in fig. 11.

To generalise, it may be affirmed that underneath all the ramparts of the fort there are stone foundations of an average width of not less than 20 feet, supplemented by varying margins, adapted to suit special requirements, and increasing the width so that it is nowhere less than 30 feet; and amounts in the east rampart to 35 feet. Whatever berm there may have been originally—and there is evidence of the same—has been utilised for increasing the width of the rampart-foundation by an addition evidently purposely made, and continuous with the scarp of the trench in front.

Overlying the foundation, the core of the rampart (figs. 11, 12) is a clustered mass of large blocks of clayey soil, light grey in colour,—a character of soil common to the district. The average height of core in the centre is 4 feet, and its width terminates on the outer edges of the stone foundation, with a batter inclining inwards as it rises in height. The blocks are laid in a systematic manner, but appear depressed in the centre, and in a sectional cutting the outline of each block can be traced by the dark material that marks their line of division. This dark line is of a peaty character, and varies in thickness from 1 to 3 inches. In one instance, peat 5 inches thick was observed, actually in position as a block. In general the blocks are seldom less than 3 inches,

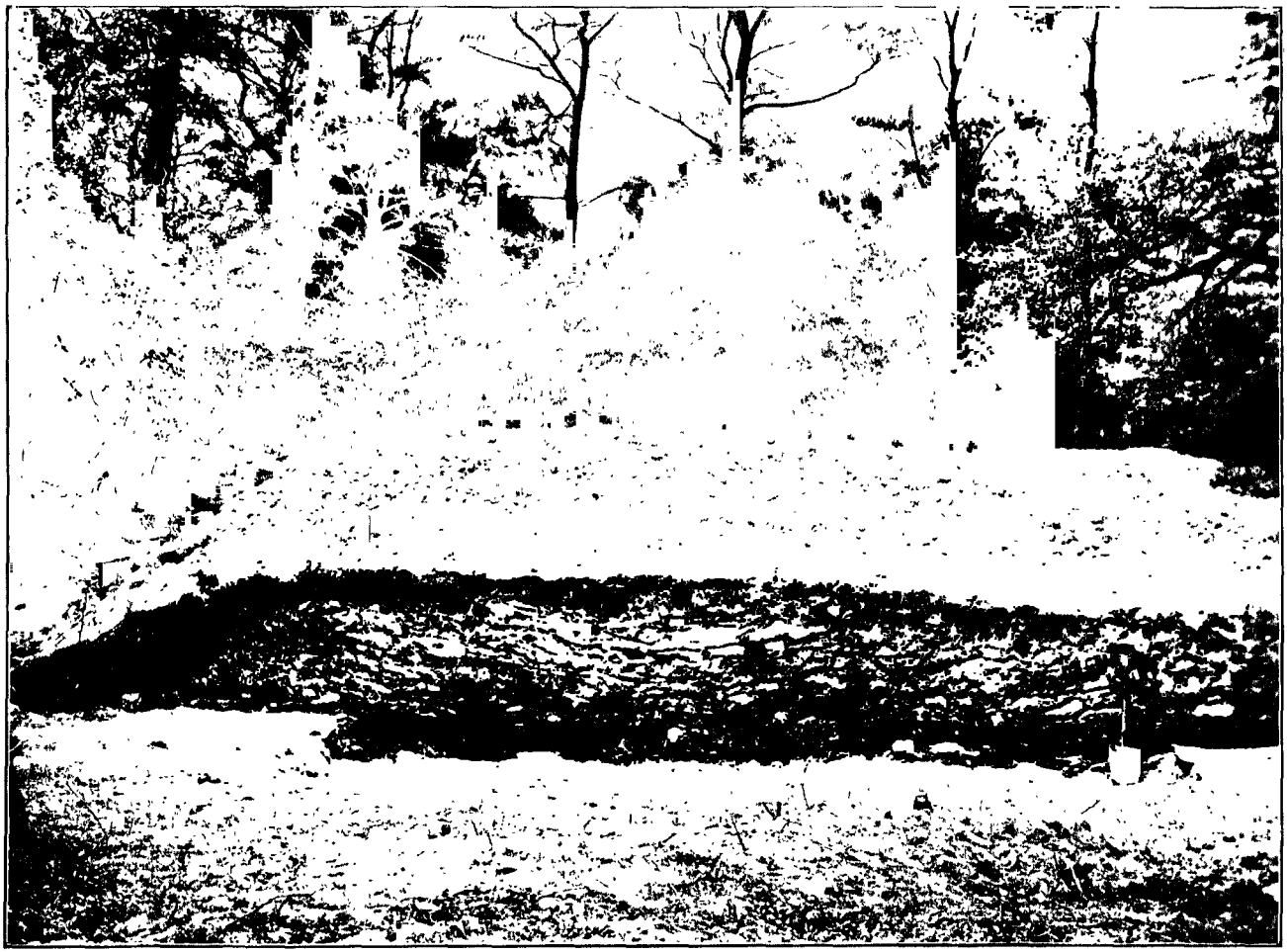


Fig. 11. West Rampart of Rough Castle Fort, looking north.

but it is not uncommon to find them 4 inches and even 5 inches thick, while in length they vary from 15 to 24 inches, and where they finish, they are tilted slightly upwards on the outer edge.

The ramifications of the division lines are very intricate, ever changing with the least removal of the soil; but by repeated trial at one part in the east rampart, it was found that the number of layers in the height of the core did not exceed 20.

Boulder stones from 3 to 6 inches in size are very plentiful among the layers (figs. 7, 11, 12), and if their presence be not accidental, there is no evidence of their practical use. They are too small to add strength by their weight, and in most cases appear rather to break bond in the layers, thus reducing the cohesion of core, especially when a few happen to be close together

While it is noted that the layers terminate at the edge of the stone foundation, similar laminated soil appears beyond its kerbs, both externally and internally, lying on the original surface, extending outwardly 6 feet and inwardly fully 8 feet, sometimes in continuation of the core, but more often quite separate, and always showing the same systematic layering, evidently intentionally laid, to add to the width of the rampart.

Overlying the laminated core across the whole width of the rampart is a depth of 2 feet of dark brown soil, uniform in substance and very compact.

D. The Trenches.

The ramparts are surrounded externally by two trenches 8 feet deep covering a width of 40 feet, including the intervening mound. On the original surface, near the apex of the mound, a course of heavy stonework, about 9 inches high and 3 to 4 feet wide, is laid along the whole length and firmly bedded, over the top of which the earthwork is carried, increasing the height.

Lining the top on the edge of the outer trench there is also a course of similar firm-bedded stonework, and this stone lining, at all parts liable to be easily damaged, is a noted characteristic of the whole work.



Fig. 12. West Rampart of Rough Castle Fort: longitudinal section and cross section of the Antonine Vallum.

It has been seen applied in various ways in all directions. Besides the above-mentioned, it is carefully laid along the base of all ramparts, mounds, and traverses, and is always prominent on the edges of declivities or trenches (see the sections, Plates I. and II.),—an enduring evidence of the care taken to render the work strong and permanent.

The defences on the west are very strong, and are a striking object viewed from the level of the burn. The whole formation is made of forced soil, and every advantage has been taken to make the most of a fine position by means of trenches and mounds. (See the section, Plate I.)

The burn to all appearance has altered but little during the centuries, at least where it first approaches in touch with the defences, and there still exists evidence of the method adopted to divert its course (fig. 1). The stream coming from the south strikes against the foot of the defence at the south-west corner, and with a quick bend sweeps away from it. To protect this point from encroachment a massive wall of boulders is built, giving direction to the stream. It rises 6 feet in height, and some of the stones used are over 2 feet in diameter. The stonework is not confined to a facing merely, but has a heavy backing inwardly, which is traceable eastward along the tailing of the outer mound of fort for at least 30 feet.

On either bank of the stream at this part stone-paved roads approach directly opposite each other, and for passage some method of bridging would be a necessity.

Going west and north, following the stream, a strong revetment wall is carried along the low level at the foot of the large mound in front of the trenches, composed of large natural boulders, sometimes placed singly, but generally having a second row lying against those in front. Other stone revetments appear in the mound at higher levels, and all terminate approaching the military way.

The foundation of the Antonine rampart is carried down the declivity in a straight line to the small burn at the bottom, but the superstructure is turned at an angle, and finishes as a prominent mound at the foot of the

military way. Between this lower mound and the trenches in front of the rampart of the fort is a steep incline, the slope of which is accentuated near the lower rampart by the formation of an oval-shaped trench close to the latter (see the section on Plate I).

The military way, apparently, has crossed the Rowantree Burn on the level,—although paving is not traceable,—as it approaches the stream in a suitable manner. From the fort it is continued straight down to the edge, and from the edge immediately opposite it rises again, taking an oblique direction up the steep bank, where easier ascent is gained along the side of a small tributary of the burn.

The trenches along the east face stop at the south border of the military way and are not continued on the north of it, a different arrangement being substituted. Running close upon and parallel with the north border of the military way is a trench 10 feet wide, which beginning about 20 feet in front of the rampart, proceeds for about 130 feet further, when it turns at right angles with rounded corner, and continues up to the inner margin of the Antonine rampart, the width of the latter extension being increased to 15 feet. To the interior of the trench a rampart is still traceable, which takes the form of a prominent mound at the south-east corner. In the centre is a core of stones, among which was observed evidence of the effects of fire. The soil forming the rampart is not laminated, and the surface is all stone-paved.

Projecting outward on the east of the south gateway is a large mound or platform, 100 feet long by 50 feet broad, composed entirely of forced soil The top is level with the margin of the outer trench, and presents a large flat surface. It is stiffened internally with courses of stone, and on the exterior, round the bottom, at the tailing of the sloping sides, it is stone-pitched in the manner common throughout the fort.

Indications of stone-paving were found in front of the south gateway over a large area, and a street runs along the west side of the platform, beyond which it becomes somewhat indefinite, but appears to continue south for about two hundred yards, where it is again observed connecting

with a flat stone-paved floor. This floor is on the east side of a rounded knoll on the edge of the burn, and is about 15 feet by 10. There is no appearance of any walling, the paving finishing with square edges on two of the sides, the others being irregular. On the south edge, near the centre of the length, there is a small construction like a cist, made of four slabs placed vertically, and with a bottom stone hollowed in the centre.

It will have been remarked that the defences of the fort are very complete. The large rampart is protected in front by two wide and deep trenches strongly constructed: to these is added, before the gateways, a special defence, situated in each case on the right hand of an enemy approaching the entrances: viz., the traverses or platforms adjoining the north and south gates, the flanking trench at the east gate, and the expanded platform close to the west gate.

II. Defences of the Annex.

Excavation revealed evidence of a rampart surrounding the annex on the east and south, although there is little indication of it on the present surface.

About 2 feet under the surface there is a stone foundation 15 feet wide, similar in construction to that of the Antonine rampart, and to the interior the stonework continues for another 15 feet like to a paved roadway. It appears much disturbed in several cuttings, but is always distinguishable. Where it abuts against the Antonine rampart a portion still remains very perfect, in which there is a culvert, with an opening 12 inches square. It is close to the junction and has connection on the inner side with a similar culvert going through the foundation of the Antonine rampart.

The trenches of the annex are special in arrangement and peculiar to this work.

On the south the rampart is defended by a single trench 15 feet wide, by 8 feet deep, which, beginning at the inner trench of the fort at the south-east corner, cuts through the intervening mound and the outer

trench in a bold sweep, and continues along in front of the rampart, following the same bend, and trending northward till it reaches the Antonine rampart. It is intersected by the military way, which crosses it on a level with the surface. In front of the above trench, facing the east, there are two platforms, separated the one from the other by a wide trench of about 20 feet, and beyond the outer of the platforms is another trench 15 feet wide. All the trenches unite into one near the south-east bend of the annex. The central and widest trench is placed obliquely where it separates the platforms, but becomes parallel with the other trenches as it approaches the military way, through which it pierces, separating the connection with the interior. Down the slopes of the trench here the stone-pitching is carried heavier and further than is usual, but the method adopted for passing the military way across the trench was not ascertained—no evidence of bridging could be found.

The outer trench on the east is in continuation of that on the south, from which it sweeps with a wide curve, approaching the military way at right angles. It ends against the roadway at the entrance of the annex, beyond which, unlike the other two trenches, it is not carried.

Referring to further evidence of the isolating of these fortifications, it may be mentioned that, besides the severance of the military way above noted, similar disjunctions occur on the Antonine berm. It will be observed on the plan, fig. 1, that, in line with the inner trenches of both east and west defences, the berm is pierced by a trench of the same width as those of the fort they are opposite; these are return cuts from the great fosse, and are carried up close to the foundation of the Antonine rampart, completely disconnecting the interior from the exterior. Further eastward, and directly in line with the mid trench, the Antonine rampart appears to have been cut through, for part of the foundation is decidedly removed; but instead of the trench being cut through the berm, the latter shows an irregular stone-pitching on the surface. From here, to the eastward, the Antonine rampart is much bolder in outline than anywhere in the interior of the fortifications, and

here also it is joined by the continuation of the raised outer platform of the annex.

All along the interior the Antonine rampart is reduced in height, and is almost level with the inner surface: at the same time it still shows a bold front facing the berm. In like manner, the rampart which surrounded the annex on the south and east is now also reduced to the level of the interior, which is found to be raised by forced soil for a depth of fully 2 feet. This lowering of the annex rampart is made conspicuous by comparison with a still existing portion near its junction with the fort at the south-west corner. This apparently untouched portion stands up bold and distinct, having the appearance of a small platform on the upper surface. The section through this rampart showed that the construction is different from any of the fort ramparts, but similar to what remains of the rampart round the annex.

In several of the excavations the foundation is found to be composed of stones laid flat on the ground, but generally it takes the form of a core of stones bedded in clay, occupying the centre of the structure.

It was observed that towards the margins the stones are purposely placed to resist the outward thrust of others superimposed upon them: this is very marked in the section referred to (see the section on Plate II.).

In the superstructure there is no lamination such as was found in the fort ramparts, but marked differences appeared in the character of the soil. In one of the cuttings the outer half in front of the stone core is of a rich brown colour, close-grained, while that on the inner side is almost as black as soot, and in much greater quantity. In the remaining high portion of the rampart the soil is of a uniform nature and colour, and being adjacent to a prominent building, the surface is all stone-pitched between the rampart and the building.

The platforms on the east defence are raised 3 to 4 feet above the original surface by added soil, and are stiffened internally with courses of stonework at intervals, and along the edges of the trenches by heavy boulder stones. The outer platform is the higher by 2 feet, and both

show a decided increase in height where facing the south-east. The inner platform is 50 feet wide at the widest and 25 feet at the narrowest part, and 250 feet in length north to south, the area of surface being fully 9700 square feet. The outer, which is shorter and broader, is 55 feet at the widest, 42 feet at the narrowest part, and 150 feet long, the area of the surface being about 7000 square feet.

On the outer edge of the trench which encircles the annex there is a close strong pitching of stones, carried well down the counterscarp of the trench, similar to what was observed on the fort trenches; but in this instance it is spread outwards to such an extent, from 14 to 16 feet, that it suggests the idea of a paved roadway. In several places, and especially near the west end of the annex, it decidedly has been used as a road (see the section on Plate II.). It branches off from the military way at the entrance to the annex, and continues very distinct along the whole front on the east and south till it approaches the traverse at the south gate, over which it rises, and connecting with the pitching on the same, is carried across the platform.

In front of the stone-paving and close to it the ground dips and falls away into a wide marshy tract.

III. The Military Way.

This paved street passes straight through the fortifications. Entering the annex from the east, it terminates at the foot of the slope near the burn on the west.

The average width is 18 feet, but there are additions made on both sides where it passes through the annex, which increases the width to about 40 feet.

It is formed of cobblestones closely placed together, the surface being of fine gravel, with a well-rounded top.

IV. Buildings in the Fort.

The remains of the buildings of the interior are in a very dilapidated condition: in most cases only the foundations exist; but where walling

is gone, it is fortunately possible to trace them by the remaining clay sub-base, indicating the position they had occupied.

A. Building No 1.

Of the buildings (fig. 13), No. 1 appears to be the principal and largest. There is a careful paving in front of it, leading from the entrance to the military way. Internally it is 50 feet long from north to south and 38½ feet from east to west. On the west side of the entrance there is a small enclosure 17½ feet long and 9½ feet broad, formed by three walls, and open along the front next the pavement. A similar enclosure may have existed on the opposite side, but of such no definite evidence was obtained, the position being very much disturbed. The floor of this portion is of hard-pounded clayey soil, the surface showing bright, with broken pieces of red tile mixed with it. The same kind of flooring is common through the entire building.

On the east side of the entrance, within the threshold, in a hole among other debris, the remains of the inscribed tablet (fig. 14) were discovered. It was in three pieces, two of which were close together, and the third only a few feet apart. A careful search failed to find the portions still wanting. Fortunately the missing part of the inscription can be easily supplied from the context:—

[IMP · CAE]SARI · TITO
[AELIO ·]HADRIANO
[ANTO]NINO · AVG
[PIO ·]P · P · COH · VI
[NER]VIORVM · PRI
[NCI]PIA · FECIT

Which being expanded would read:—*Imperatori Cæsari Tito Aelio Hadriano Antonino Augusto, Patri Patriæ, Cohors sexta Nerviorum Principia fecit*:—In the reign of the Emperor Cæsar Titus Aelius Hadrianus Antoninus Augustus, the father of his country, the sixth cohort of the Nervians made the Headquarters. This is the first instance of the occurrence of the word Principia in Scotland for the headquarters

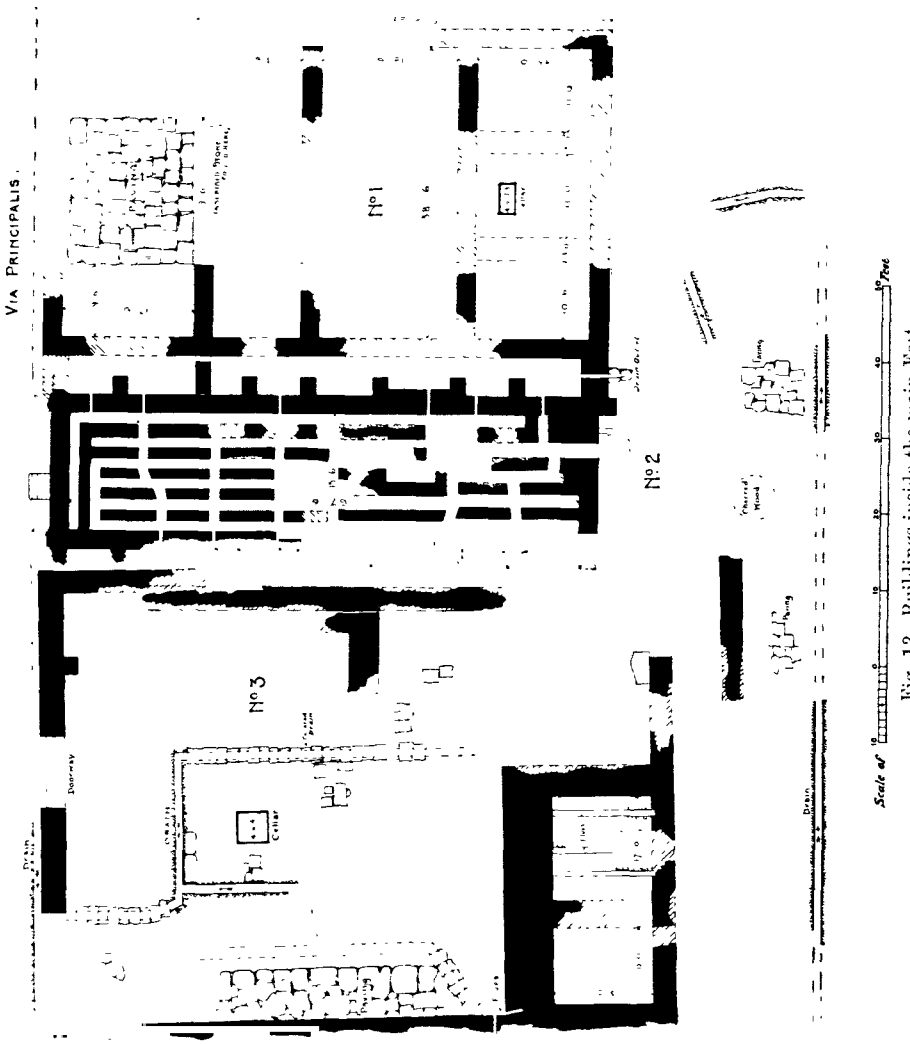


Fig. 13. Buildings inside the main Fort.

of a station. There are inscriptions in England commemorating the restoration of ruined Principia at Bath and Lanchester.

The interior of the building is divided by partitions into three apartments, the inner of which is again divided into three chambers.

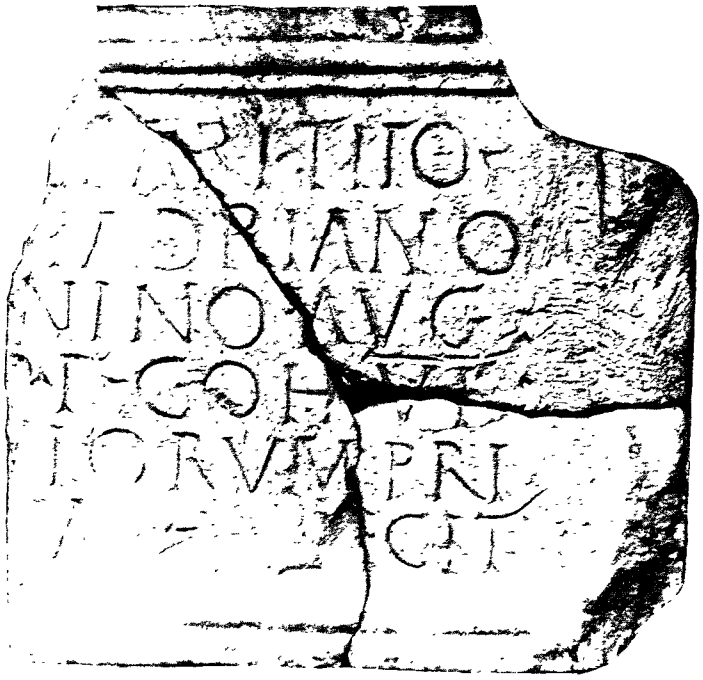


Fig. 14. Inscribed Tablet found in Rough Castle.

Of the three apartments, that to the north is $11\frac{1}{2}$ feet wide, the centre one is $18\frac{1}{2}$ feet wide, and the south one 15 feet wide, within the walls. The two former run all the length of the building from east to west, but the latter is apparently subdivided by two cross walls. These appear as incomplete foundations, of a character not anywhere else observed. In position they are on a level immediately below the

other adjoining stone foundations, and pass under them similarly to the sub-base. They are composed entirely of chips of sandstone, no clay being used with them, nor is there any appearance of walling having been reared upon them.

In many instances the mixture of clay with stones in the lower foundations, surviving the upper stonework, is the only way of tracing connection between existing pieces of walling. As regards these two

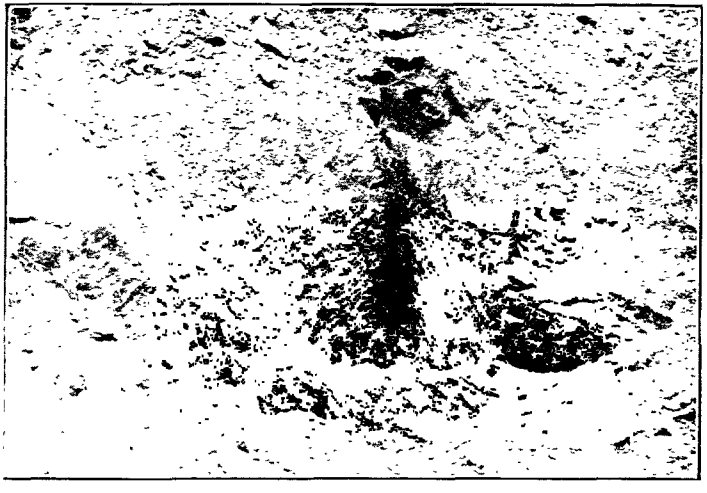


Fig. 15. Pit in Building No. 1.

cross walls, the difference is so great as to call for remark, particularly as they do not extend further than the walls of the apartment in which they appear.

The other walls dividing the apartments were distinctly traced, but they showed no indication of footings in the centre. It is possible they were not projected into the interior any further than to be in line with the opening at the entrance. The width of the entrance is 19½ feet, and the walls are 30 inches thick where they show above the foundation, which has a 2-inch scarcement projecting to the outside. In the

southmost apartment, in the centre and near the division wall, there is a sunk stone-lined pit, 4 feet long, 2 feet 3 inches wide, and 2 feet 6 inches deep (fig. 15). The flagstones of which it is composed are placed on edge and rest upon a similar stone in the bottom. It has no outlet or overflow, nor is there any drain near it; and although it is watertight, it has more the appearance of a cellar than a water-cistern.

B. Building No. 2.

This lies to the west of No. 1, and is a structure of a kind invariably met with in all our explorations of Roman works. It is separated from No. 1 by a space of 5 feet, and has been a strongly constructed building. The portions now remaining are all under what was probably the floor, pieces of which still remain *in situ* (figs. 16, 17). Within the walls the length is 67½ feet and the width is 15½ feet The walls are 30 inches in breadth, except where an expansion between the third and fourth buttress from the south increased it to 42 inches.

Nine buttresses, projecting 2 feet, are arranged along each side, and two at each end.

Between the buttresses the walls are pierced with holes 5 inches wide by about 9 inches high, and the whole interior is arranged into a series of channels, divided by stone-and-lime built dwarf walls, interupted at intervals to allow of the connecting channels passing from one side of the building to the other, the latter being opposite the holes pierced in the walls (figs. 16, 17). The channels average 15 inches in width and the dwarf walls about 16 inches. Overlying the walls in several places are pieces of flagstone 2 inches thick that here and there still cover the channels, and are carried through the walls and buttresses as a bonding course (fig. 18). The arrangement seems to have been for ventilation and keeping the floor of the building dry. A few of the holes in the walls appeared to be purposely filled up with hard-rammed puddled clay.

Between buildings Nos. 1 and 2, at both ends, the intervening space



Fig. 16. Building No. 2, viewed from the east



Fig. 17. Building No. 2, from the Military Way, looking south.

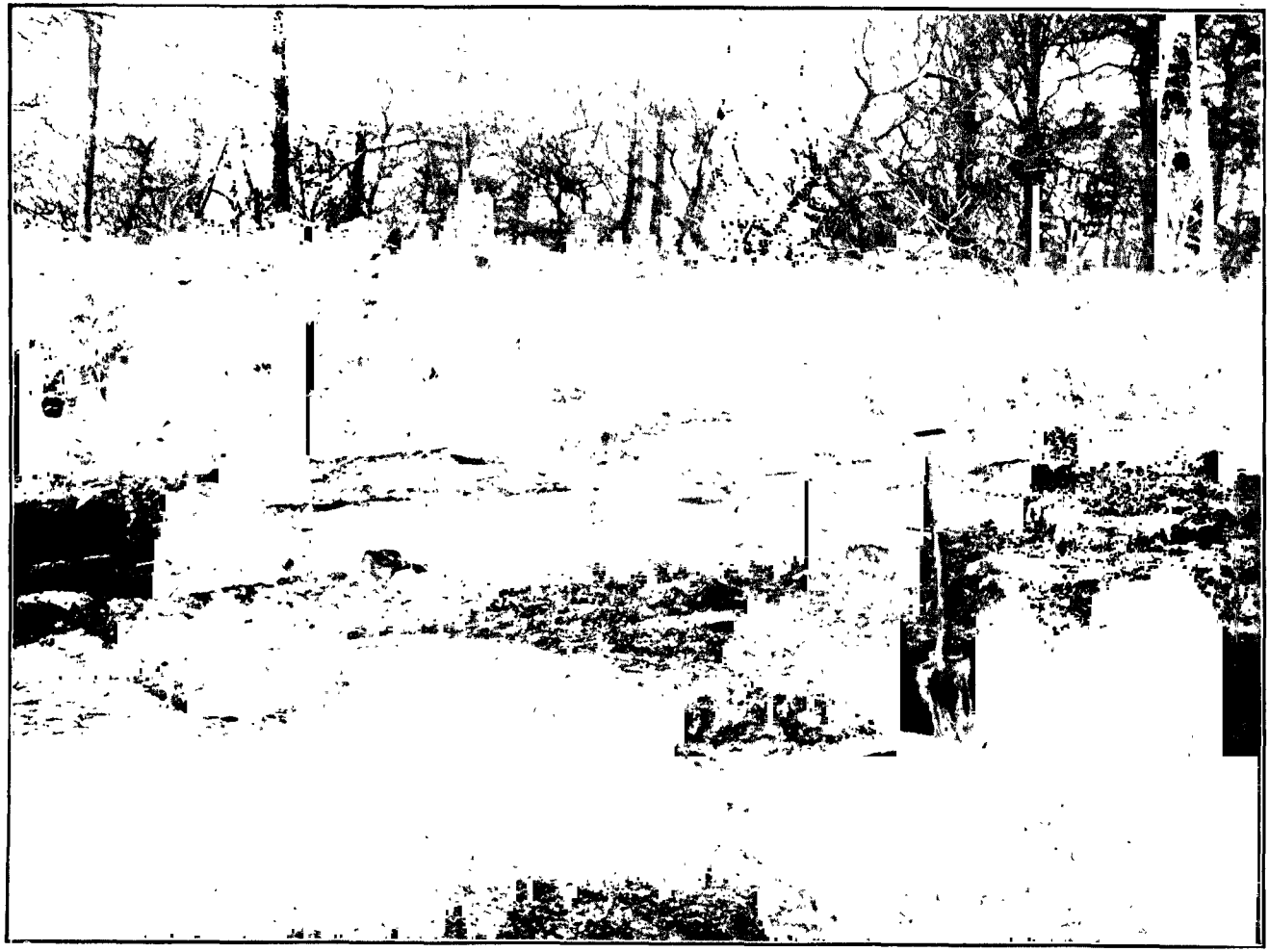


Fig. 18. Building No. 2, showing Flagstones in position.

has been closed at a subsequent time by the erection of connecting walls, through which a free passage is left for draining away the water. Part of the drain on the outside is still preserved (fig. 19).

At the north end of building No. 2, facing the military way, there



Fig. 19. Exit for water between Buildings No. 1 and No. 2.

is a small platform, composed of flagstones bedded upon rough-built stone supports $3\frac{1}{2}$ feet wide and projecting 21 inches from the building, having two stone steps leading up to it (fig. 17). As it is on the same level as the top of the flagstone floor, it may have been a landing before the entrance.

C. Building No. 3.

This enclosure is almost obliterated, and no definite plan is now attainable, but a few interesting points remain worth recording.

The wall along the west is built against the rampart and is 30 inches in breadth. It forms a revetment to the lower part of the rampart, the laminated structure of which lies close against the stonework. At the south-west corner there is an oblong chamber 13 feet wide by 28 feet long, apparently divided by a partition, but certainly separated by a difference of floor-level. The portion close to the rampart for 11 feet is 18 inches below the other portion, being separated from it by a partition, of which only a short piece remains.

The higher and larger portion has three flues about 9 inches wide and 5 inches deep, built of stones, crossing on the floor-level from north to south, which were recessed into the south wall, but only abutted against the north wall. They were only definitely traceable in this direction, although there were indications of at least one cross flue passing up the centre.

Outside the broad wall on the north of the chamber, where it unites with the west wall, there are two flues, 5 inches wide, placed very low and near the ground. One is directed upwards and through the wall on the west: the other angles eastward and upward through the broad wall above mentioned. This extra broad wall is the remains of two walls, so closely situated as to rest on a foundation all on the same level. The northern part of the wall rises above the other, this latter evidently being a basement wall only.

The outer or south wall is continued eastward beyond the chamber a distance of 14 feet, and ends with a square return like the jamb of a doorway, on the inside of which a large flagstone-paving still lies undisturbed.

The north wall at the military way is continuous along the whole 60 feet of frontage, but is apparently of two distinct types. A portion in the centre, in which there is the entrance, is superior in workmanship

to the remainder. In the former the stonework is small and regularly laid: in the others the stones are larger and roughly hammer-dressed. The foundation appears to be of a uniform character throughout.

The entrance doorway is 9½ feet wide, and has a stone cill on the threshold, recessed 9 inches from the outer face of wall, and a stone-built open gutter 9 inches wide runs along the whole front of the wall, close to it.

The No. 3 enclosure is not parallel with the adjoining buttressed building, but with the military way, and is square set-off from the west wall, whereas buildings Nos. 1 and 2 lie parallel to the line of the Antonine rampart. The difference is not great, but is marked at their junction by the presence of the remains of another wall built over the returned east wall of the No. 3 building, this apparently later erection being parallel with those to the east (fig. 13). There is another distinct piece of walling lying close against the latter, near the centre of the enclosure, and running parallel with it for about 8 feet, which, with a square return, projects into the interior about 11 feet; the part close to the other wall is 30 inches broad, the return being increased to over 48 inches. These are now only remnants of walling, the connections and continuations of which are completely destroyed.

Near the centre of the enclosure, placed equidistant 25 feet from the north and west walls, is a sunk pit 4 feet square by 2½ feet deep, built of four vertically-placed flagstones, and with two pieces of the same laid in the bottom. This pit is similar to that in building No. 1, but is larger and better finished. Although it is surrounded on three sides by drains, it has no connection with any, nor has it any outlet or overflow.

The whole area appears to have been covered with flagstone-paving in a very substantial manner, from the evidence of several undisturbed portions, the covering of the drains being part of the floor. Along the west wall there is a complete stretch of stone-paving about 30 feet in length and 6½ feet in breadth, which is laid with irregular-shaped flat stones. At both ends and in front of it runs a channel, part of which

is still complete, showing that it is the remains of a drain similar to the others, and which, to appearance, is connected with them. They are all conducted into the one channel, which passing through the north wall, joins the gutter in front of it, the fall being towards the west gate of the fort. The width of the drains is about 15 inches at the top; they are V-shaped, tapering to the bottom, and are 9 inches deep. This formation of drain is not general throughout the fort; in most cases the sides are vertical.

The floor in the south-east portion of the enclosure is entirely different from that in the centre. It consists of a flat surface of pounded clay and sand, with a large quantity of finely-broken red brick among it, which when first uncovered made it a conspicuous object in the surroundings.

In this portion of the interior of the fort, it may be remarked, we have evidence of alteration or additions, and the most complete and finished workmanship side by side with that of an inferior character.

Regarding the remainder of the interior of the main fort there is nothing definite to report. Here and there streets and pieces of paving were brought to light, and deep holes were opened showing evidence in their interior of the continued use of fire. Generally, it was found that every piece of ground within the ramparts had been utilised to the utmost advantage. Of stone buildings there were none, and it is probable any erections above ground—occupying the blank space on the plan—were temporary, perhaps of timber, and subject to occasional re-arrangement.

Whatever may have been located in those evidently much used positions can only be matter of conjecture, as there was no evidence of any definite arrangement, although the whole area was explored down to the original surface.

V. Building in the Annex.

From the exploratory cuttings taken through the annex in various directions, it was ascertained that no stone building had been erected

within its area other than that now to be described. But before doing so, attention may be drawn to a probable roadway between the fort and the annex (fig. 1). The roadway runs along the outer edge of the eastmost trench of the fort, and as it passes outward, crosses over the south trench. At the latter, immediately between the projecting platform on the south and the terminating mound of the annex rampart, the trench is observed to be filled up almost to the top, for a width of 15 feet, with tumbled stones, which make a passage across on the level. No similar formation appears anywhere else in the annex trench. It is connected with a broad stone-paving directly in front, and its further prolongation eastward takes the form of a well-defined stone-paved road.

To the inside of the annex the road was traced at intervals: passing up the slope at the corner, it continues northward till it joins the military way, a part of it being very perfect near an adjacent building, where it is seen to branch towards the paved surface of the mound already mentioned. That the trench has been unobstructed originally is evident, for the stones and soil used in the filling up are distinctly additional, and are only found in the hollow of the trench.

The stone-pitching along the margin of the trench is part of the original construction, but it is probable there have been additions subsequently, and a roadway made at this particular place. This is the more likely from the fact that both of the fort trenches on the east defence were in a like manner almost wholly filled up with large stones and gravel, as if additional accommodation had become a necessity.

Building No. 4.

This is the only building of stone within the annex (fig. 1). It is situated in the centre of the space between the oblong defence in the north-west corner and the prominent mound in the south-west corner of the annex, the whole having the appearance of a combination for a definite purpose.

What remains of the building is sunk fully $2\frac{1}{2}$ feet below the surface of the military way, from which it is separated by a wall enclosing a

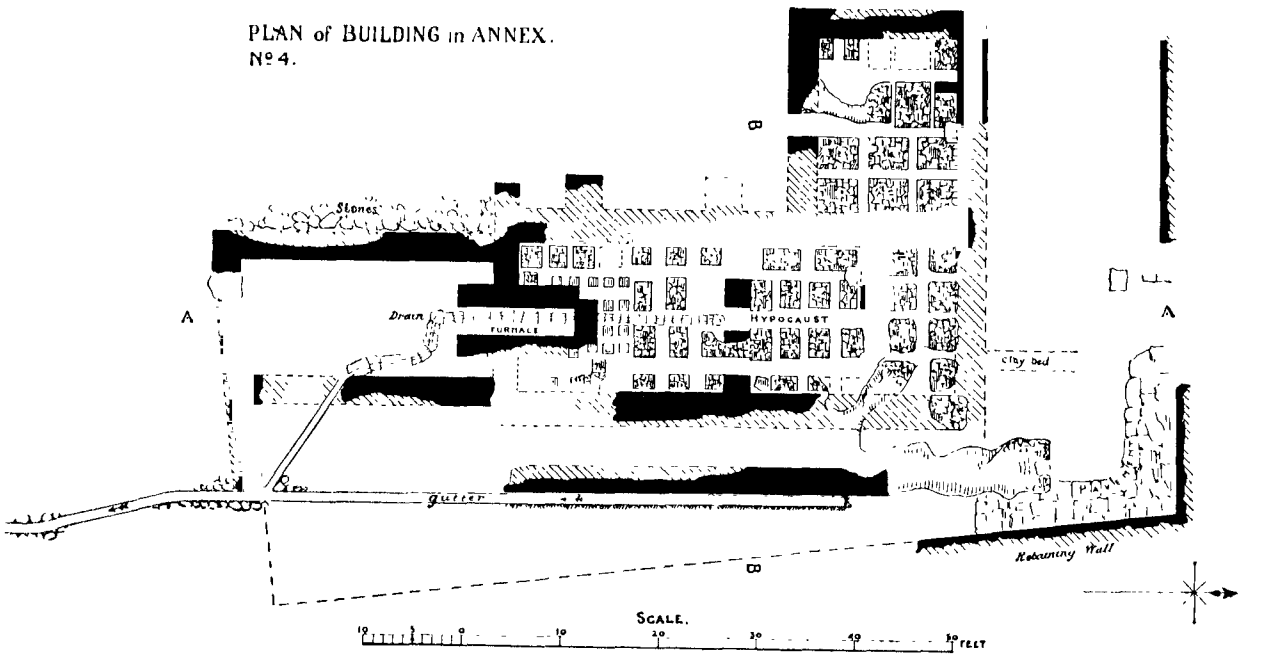


Fig. 20. Building in the Annex.

court, the surface being of hard-pressed gravel. In the wall there is a blank, possibly the position of the entrance, from which a flagstone-pavement leads to the east side of the building, and is carried along the same a distance of 21 feet.

The building is L-shaped, arranged in two distinct chambers: the larger is 45 feet long and 15 feet wide, the enclosing wall being $3\frac{1}{2}$ feet



Fig. 21 Building No 4, showing two kinds of built work.

broad. The other is $17\frac{1}{2}$ feet long by 15 feet wide, and the walls are 3 feet broad.

Evidence of alterations and additions appear throughout the entire building, and that they have been extensive is all the more probable as it is only the basement that now remains in which the differences are so distinctly noticeable.

In the enlarged plan, fig. 20, the portions shaded black indicate what exists of the earlier walling; the cross-hatching the remains of the same walling traceable but destroyed, the dotted

lines alone being conjectural. The remainder of the stonework of the interior is later or additional, in many cases being built upon the remains of the earlier work. The distinctive difference in the built work is shown in the illustration (fig. 21).

Outside the east wall there is a large sewer 1 foot wide and nearly 2 feet deep, built in three courses of dressed stones on the outer edge, the wall of building forming the inner edge. Beyond the building it is continued to the outer trench by a drain built of large boulders, along the east side and at the foot of the rising mound on the rampart. The furnace is placed in the centre of the south wall; it extends outwardly about 3 feet, but the greater part is projected into the interior. The walls are 2 feet broad, and are partly built of stone and partly of red bricks. The dimensions of the interior are 12 feet in length and 3 feet in breadth. It gives every indication of having seen much service, the destructive influence of fire being very noticeable on the inside of the walls and the near surroundings, while all about the building soot is plentiful in every direction.

Around the inner end of the furnace, regularly arranged, are a serious of hypocaust pillars (figs. 22 and 23), built of red bricks about 10 inches square by 2 inches thick, regularly laid and set in lime, —(lime is freely used in all this building, particularly in the later work). One of the pillars, however, is of solid stone, in the form of an altar (fig. 23).

In the interior are four rows of pillars (fig. 24), built entirely of stones and lime, the intervening spaces forming channels for the passage of the heated air: the pillars placed next to the walls stand clear of them by 2 or 3 inches, the space between being completely clogged with soot, among which were many broken pieces of tile, having the edges returned and with reticulated lines on the flat surface.

A small drain, 5 inches wide and 9 inches deep, covered with flagstones, runs down the centre of the floor, and passing under the furnace, is conducted into the large drain outside the building. It probably served at one time to take the water off the area, but when opened it was



Fig. 22. Building No. 4, from the south-east.

found to be entirely choked with hard soot. The inlet to it was not discovered. Opposite the mouth of the furnace there is a chamber about 25 feet long and 12 feet wide, which probably was the stokehole. An opening in its end wall leads on to the paved way on the inclined mound in front.

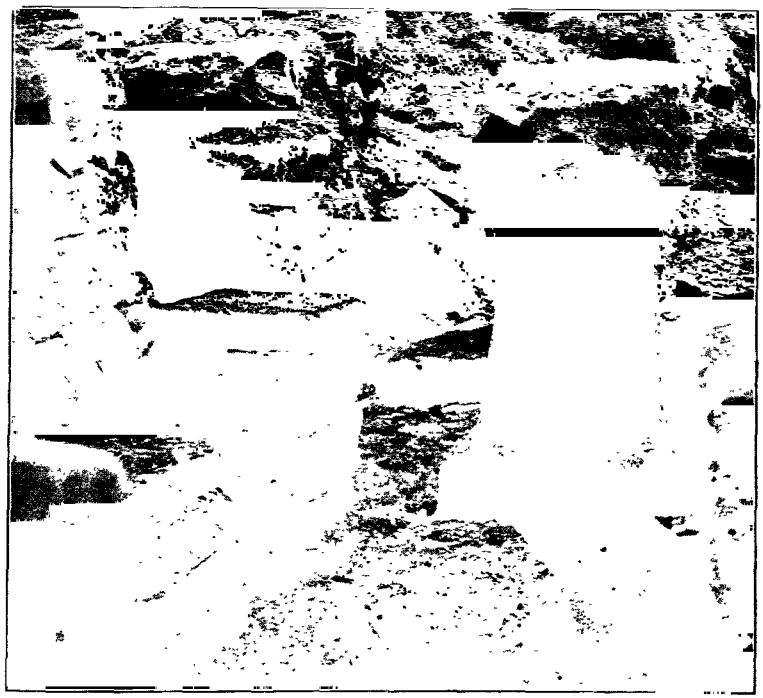


Fig. 23. Hypocaust Pillar of a single stone and Pillars of bricks in Building No. 4.

The other chamber, forming the return at the north end, is similar in arrangement to the larger one, but is quite independent of it. Although there is now no indication of a furnace, everywhere there was evidence of soot, and it is probable the entrance seen in the south wall may have had some connection with it.

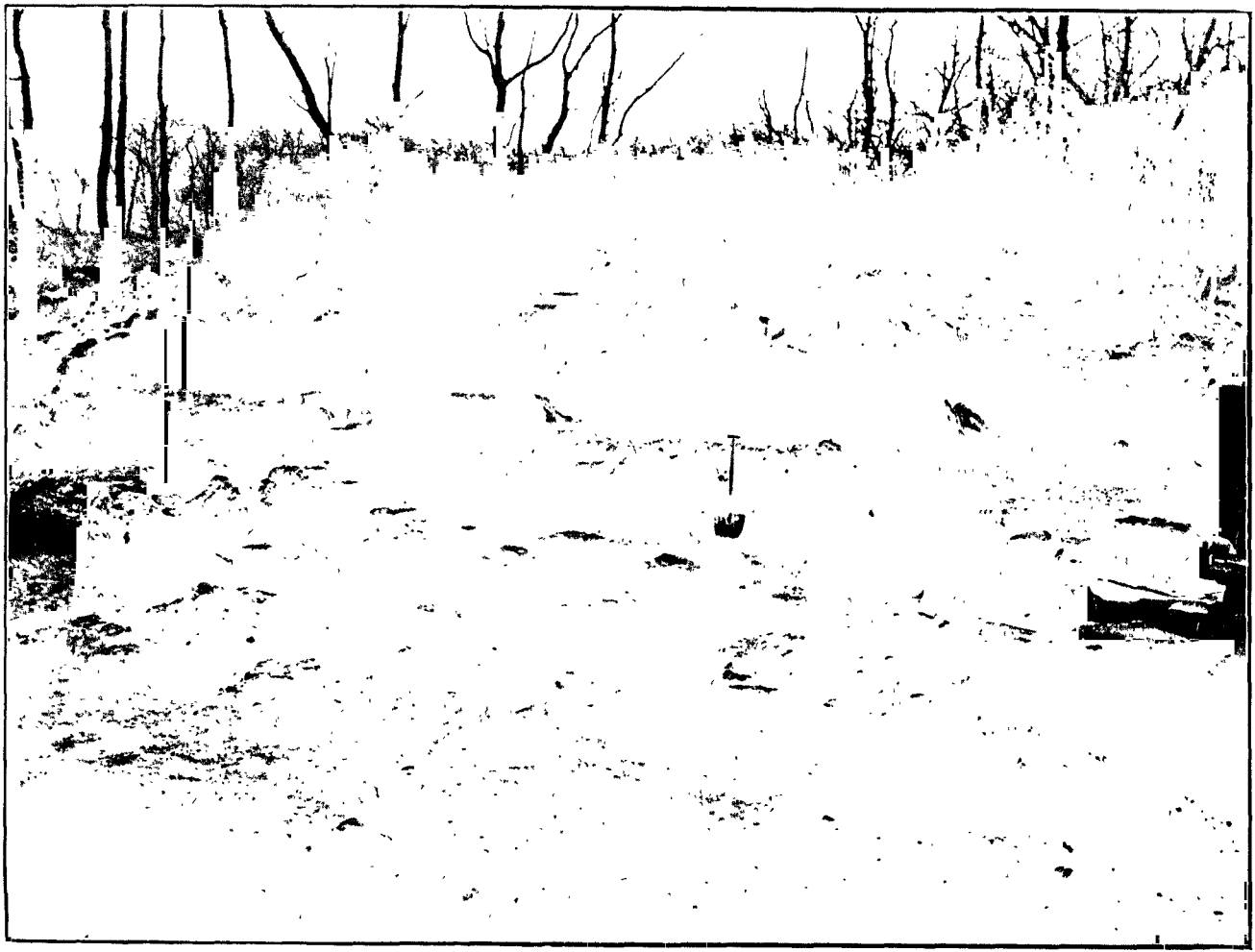


Fig. 24. Hypocaust of Building No. 4, looking south-west.

At the north-east corner there is a length of about 28 feet remaining of a revetting wall, which apparently has surrounded the whole building. In front of it the ground is raised 4 feet above the normal, and near the military way it has the appearance of a raised platform.

The work of surveying this fort has been arduous, by reason of its position in the heart of a dense wood, making it necessary to use the utmost care to secure accuracy. That it has been accomplished satisfactorily is to a great extent consequent on the able and willing assistance the writer received from local and enthusiastic friends, which he has great pleasure in acknowledging. To Mr J. R. MacLuckie, F.S.A. Scot., his best thanks are due for counsel and guidance, and for information freely given from his intimate acquaintance with the site, as also to the two young Civil Engineers, Messrs David Ferguson and Ian MacLuckie, for their able and effective assistance in plotting the levels of an intricate situation: and to my young comrade and constant assistant, Mr D. Maclay, junior, whose experience of such work greatly facilitated the progress of the survey.

For the excellent photographs illustrating this paper we are obliged to Mr J. G. Ure, of Bonnybridge, who, under the guidance of Mr Mackie, freely gave experienced assistance in their production.

III. Notice of the Pottery, Bronze, and other Articles found at Rough Castle. By Joseph Anderson, LL.D., Assistant Secretary and Keeper of the Museum.

The number of relics found in Rough Castle was comparatively few. They include the usual varieties of pottery and tiles, a few fragments of bronze, some implements of iron, and some architectural fragments and other remains in stone, including an inscribed tablet.

Pottery.—The amount of "Samian" ware recovered was small, and the number of ornamented pieces few. The largest piece found is part of the bottom of a Bowl, the circular base of which is 4 inches in diameter, and the body of which must have exceeded 8 inches in

diameter. The ornamentation has been arranged in compartments filled with human figures, floral or foliageous designs, and circular medallions: but as only the lower parts of these compartments remain, the subjects cannot be definitely described.

The upper part of a large Bowl about 6 inches by $3\frac{1}{2}$ inches, having 2 inches of plain space between the roll moulding of the lip and the band of festoon and tassel ornament. This bowl has been decorated in compartments, of which the upper parts of two only remain. One contains the figure of an eagle, the other a seated figure with a lyre, and a third compartment shows part of the outline of a circular medallion.

A portion of the side of a small Bowl about $2\frac{1}{2}$ inches deep and the same in width shows, under the usual band of festoon and tassel ornament, parts of three compartments, one containing a human figure, the second a bird in a semicircular medallion, and the third a human figure stooping, and another which seems to have horns, but is much defaced.

A portion of the side of a small Bowl $2\frac{1}{2}$ inches by $1\frac{1}{2}$ inches has a variety of foliageous pattern with a large leaf of octagonal shape, the sides of the octagon being concave, and above it what seems to be a small bird.

Another fragment of a small Bowl $2\frac{1}{2}$ inches by $1\frac{3}{4}$ inches has underneath the usual band of festoon and tassel ornament a cluster of leaves, and above it on one side a bird and an annulet.

A fragment of a Bowl $2\frac{1}{2}$ inches by 2 inches, of darker colour than the others, shows two bands of ornament just above the base, and part of the outline of a medallion above.

Of plain "Samian" ware there is a considerable quantity, some fragments showing the usual shapes of vessels of this description, but so much mutilated that none can be reconstructed. Among them is part of the rim of a Mortarium, showing the spout-like depression on the upper part of the lip. Two are shallow, saucer-like vessels, over $4\frac{1}{2}$ inches diameter: the one has a sloping side 2 inches in height, with a plain rounded lip: the other has also a sloping side $1\frac{3}{4}$ inches in height, with a roll-moulding on the outside of the lip.

Of the grey and black ware also the quantity recovered was comparatively small, and consisted chiefly of the fragments of the bottoms of vessels of the customary shapes. One Platter or saucer-shaped dish, with the usual flattened and turned-over rim, of which nearly one-half remains, is 5 inches in diameter and $1\frac{1}{2}$ inches in depth. The outside is ornamented with diagonally crossing lines scored on the surface. Another dish of the same shape is about the same size. A flat bottom

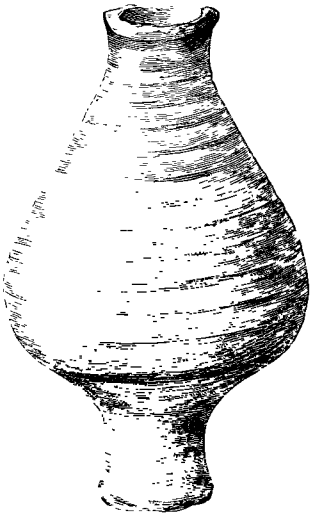


Fig 1. Miniature Amphora. ($\frac{2}{3}$.)

of a wide shallow dish of highly glazed black ware is 6 inches in diameter and barely $\frac{1}{4}$ inch in thickness. The bottoms of small Jars in black or grey ware, varying from 5 to $1\frac{1}{2}$ inches in diameter are common, but portions of the sides or upper parts of the vessels are much less frequently represented.

Of the soft unglazed red ware there are a good many fragments, chiefly of bottoms and handles and parts of the necks of Jars of various sizes. Among them is a miniature Amphora (fig. 1) which has lost its neck. It is $3\frac{3}{4}$ inches in height and $2\frac{1}{4}$ inches in greatest diameter.

The bottom terminates in a solid prolongation $\frac{3}{4}$ inch in diameter and the same in length. The body of the vessel is ornamented with convoluted horizontal bands scored on the wheel. Another of larger size has been over $3\frac{1}{2}$ inches in diameter. The base of a small Jar of extremely thin ware, varying from about $\frac{1}{8}$ to $\frac{1}{10}$ inch in thickness, is only an inch in diameter, widening abruptly to about 3 inches in diameter. A large basin-shaped vessel, somewhat like a Mortarium, but thinner, and without the roughened interior surface, has a base of about 3 inches in diameter and is $2\frac{1}{2}$ inches in depth.

Portions of two if not three small vessels of extremely thin whitish paste, with the exterior surface blackened and rough-cast, similar to those found at Camelon, also occurred.

Portions of Mortaria of various sizes are rather abundant. One, of which three pieces have been put together, measures $10\frac{3}{4}$ inches in internal diameter and $3\frac{3}{4}$ inches in depth. One has been clamped together after breakage, in the way that the modern tinkers used to clamp together broken household pottery with leaden or pewter clamps. Five have palm leaves as potters' marks on the lip.

A considerable quantity of fragments of Amphoræ, including handles and lips of large size, were found, but none of special variety or unusual interest.

Potters' Marks.—The pottery from Rough Castle has yielded but few potters' marks. The following is a list of those that are decipherable:—

On Samian Ware.

TASCILLI · M
OF CVNI
. . . DOVICC . . .
. . . . NI · M

On Mortaria

IOSSIA
SAR R · IE
IOHVS
DVRS . . IA
VINONI F

On the handles of Amphoræ.

DOM
COR . . . LL

Tiles.—A considerable quantity of fragments of tiles of reddish clay were found. They are flanged on the under side, and decorated on the upper flat face with diagonal scorings crossing each other so as to make lozenge-shaped spaces of about an inch in width. Those that retain the flanges on both sides are about 5 inches across the upper face, but none show the original length. They have been badly fired, and in consequence are very soft.

Glass.—A considerable quantity of fragments of window-glass of the usual character was found. The largest piece is 7 inches in length by about $2\frac{1}{2}$ inches in width, and fully $\frac{1}{8}$ inch in thickness. It shows along the two unfractured sides the original rounded edges of the rectangular slab, as it was spread out and cooled

One piece about 2 inches square is part of the side of one of the square-sided blue glass bottles so often found in Roman sites. Another piece is part of the loop-handle of a large bottle or vase of the same blue glass, with crimping at the junction of the handle with the neck of the vessel. A third piece is part of the rounded margin of the bottom of a vessel of very thin bluish glass, blown to shape, and with $1\frac{1}{4}$ inches of the height remaining. A very small piece of a thin and almost transparent glass vessel shows two parallel lines about $\frac{1}{10}$ of an inch apart, cut as a moulding around the turned-in portion of the vessel.

Bronze.—The bronze objects found were very few and unimportant. The rounded end of the flat handle of a bronze Patera, measuring $1\frac{1}{2}$ inches in diameter, and scarcely more in its length, to where it has been broken off, shows the usual moulded ornament round the central perforation, and two small circles with central dots on the prolongation of the handle. The under part is, as usual, plain.

A fragment of what seems to be the expanding end of the handle of another Patera is $2\frac{1}{4}$ inches in length, $1\frac{3}{4}$ inches wide at the expanded end, narrowing to $\frac{7}{8}$ inch at the other end, and without ornament, except

that it is pierced in the middle of the expansion by a triplet of circular perforations.

A circular Ring of bronze, having a central circular aperture $\frac{7}{8}$ inch in diameter, round which the ring is concave on both sides, and $\frac{3}{8}$ inch wide, the circumference being a flattened rim $\frac{1}{4}$ inch in width.

Some greatly decayed pieces of thin bronze of indeterminate character were also found.

Lead.—A leaden Whorl, $1\frac{1}{8}$ inches in diameter, pierced by a central hole nearly $\frac{1}{4}$ inch in width, was the only determinate object found in this metal.

A round tapering Rod of lead 5 inches in length and $\frac{1}{2}$ an inch in

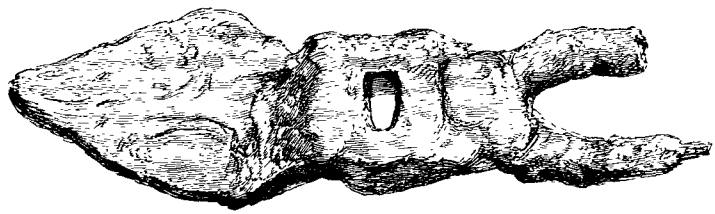


Fig. 2. Iron Hoe with forked end. ($\frac{1}{3}$.)

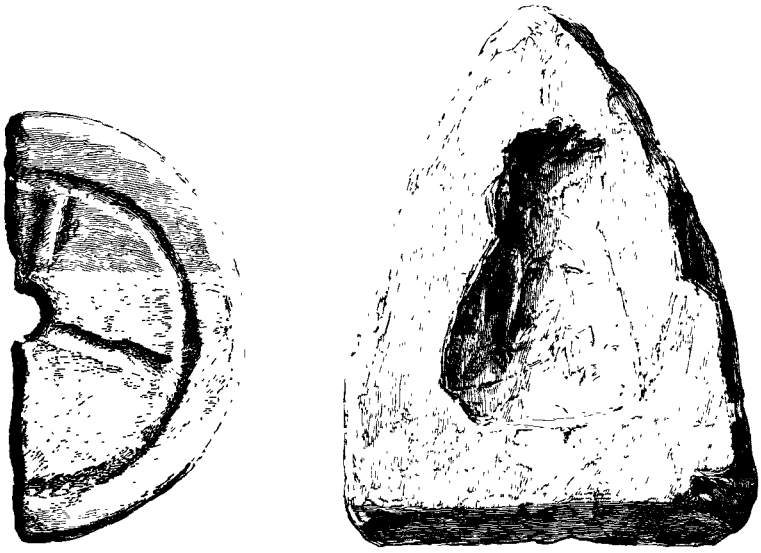
diameter at the thick end, and a portion of a ring $1\frac{7}{8}$ inches in diameter and of triangular section, were also found.

Iron.—As usual, a few implements of iron occurred, but mostly in such an oxidised and mutilated condition as to be practically indeterminable.

One implement is a Hoe (fig. 2) with a forked end opposite to the customary spade-like end. It measures 11 inches in length, the spade-like end being somewhat trowel-shaped, $4\frac{1}{2}$ inches in length by 3 inches in greatest breadth, the hole for the handle placed in the centre of a thickened part of the implement. The prongs on the reverse end are broken, so that their length is uncertain. Similar implements, found at the Roman station of Saalburg near Homburg, are figured by

Jacobi,[1] as examples of the *sarculum bicorne*, an agricultural or garden tool in common use among the Romans.

The iron Sheathing of what in comparatively modern times was called in Scotland "a shod shool," or an iron-sheathed spade (meaning a wooden spade mounted with an iron sheath round the edges), measures 9 inches in length by 8½ inches in width, having an opening in the middle of the



Figs. 3 and 4. Stone Disc and rudely made Lamp. (½.)

upper part 6 inches in depth by 3 inches in width. Examples of this implement were also found at Saalburg.

An implement 7 inches in length, resembling a shoemaker's knife, its crescentic blade 3½ inches wide and 1½ inches deep, being carried at the end of a rod about ¾ inch square and 5½ inches in length.

The other iron things are Nails, Staples, Rings, Hooks, and indeterminate fragments.

Stone.—The objects of stone that have been used as implements are

[1] *Das Romerkastell Saalburg*, von L. Jacobi (1897), p. 445.

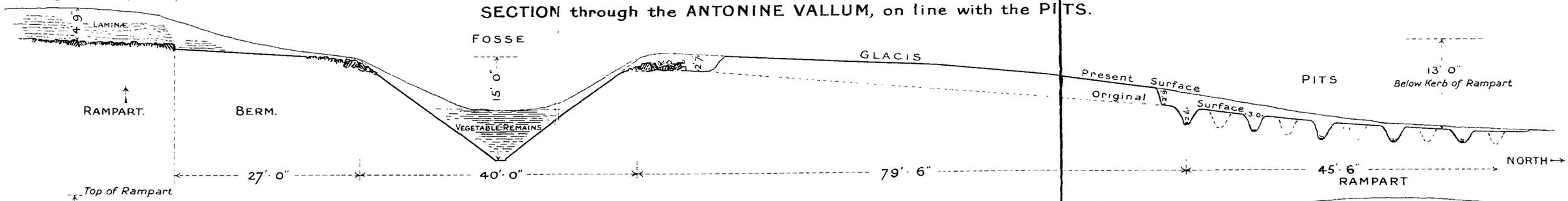
chiefly naturally shaped pebbles of sandstone and hæmatite that have been used as Whetstones, Polishers, or Burnishers. Two of these are marked with grooves, as if used for sharpening awls or finely pointed instruments. Other two of coarse sandstone are shaped like modern sharpening-stones for reaping-hooks or scythes. There is a broken Quern of vesicular lava, and a large truncated Cone of sandstone 10 inches in height and 5½ inches in diameter at the base, having a hole nearly 2



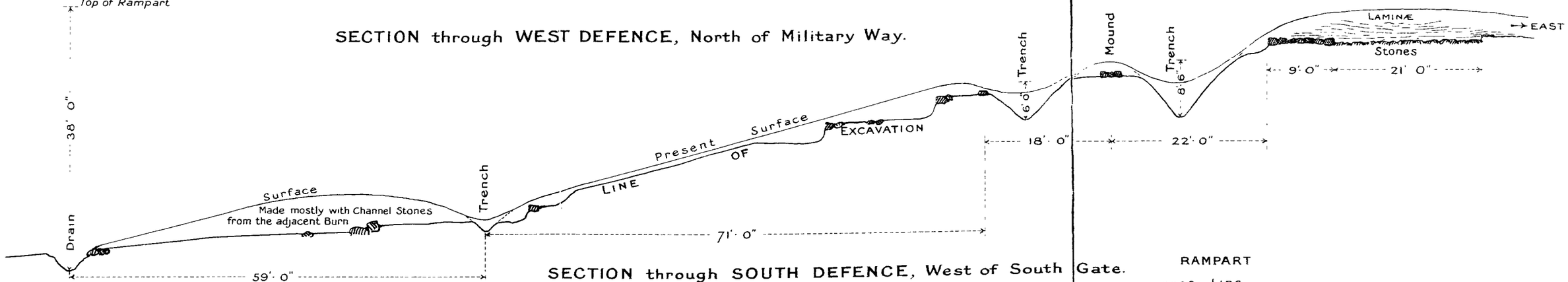
Fig. 5. Part of Shoulder of Statue in sandstone. (¼.)

inches in diameter pierced through its upper part in the middle of its width, as if for suspension. A flat Disc of sandstone, 4¾ inches in diameter and about ¼ of an inch in thickness, is pierced by a hole about ½ inch in diameter in the centre. Half of another such Disc (fig. 3), 4½ inches in diameter and neatly made, has one of its faces ornamented with a cross within a circle. Seven other Discs of sandstone 5 to 6 inches in diameter, about ½ inch to ¾ of an inch in thickness, and roughly chipped to shape, may have been used as covers for the mouths of

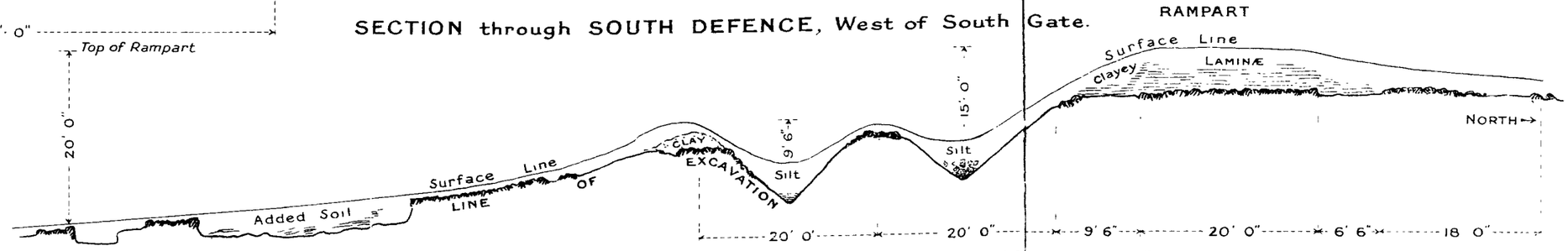
SECTION through the ANTONINE VALLUM, on line with the PITS.



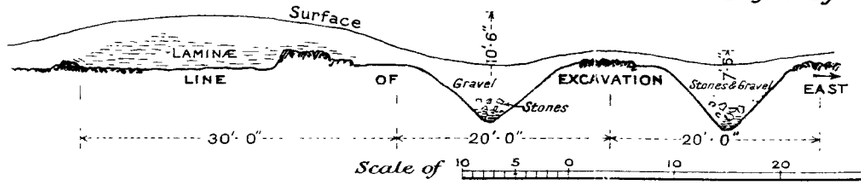
SECTION through WEST DEFENCE, North of Military Way.



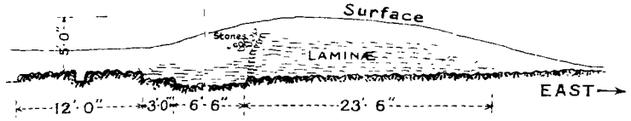
SECTION through SOUTH DEFENCE, West of South Gate.



SECTION_EAST RAMPART OF FORT, South of Military Way.



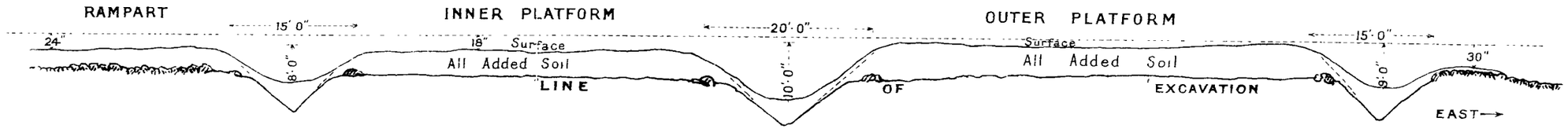
SECTION_EAST RAMPART OF FORT, North of Military Way.



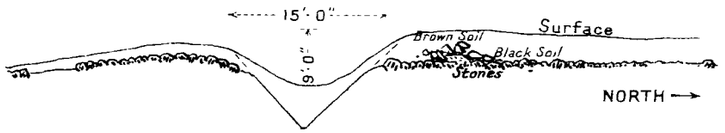
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Margo Buchanan, Falkirk del.

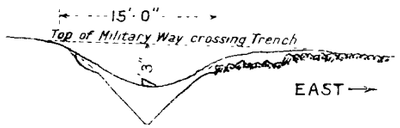
SECTION — Through the EAST DEFENCES of the ANNEX.



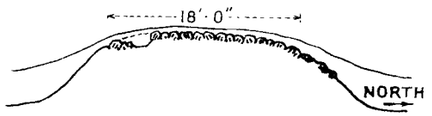
SECTION — Through SOUTH DEFENCE of ANNEX.



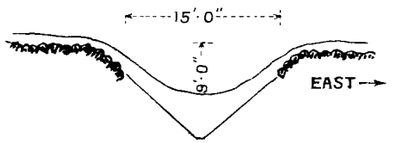
SECTION — At GATE of ANNEX.



SECTION — Military Way crossing Inner Trench of ANNEX.



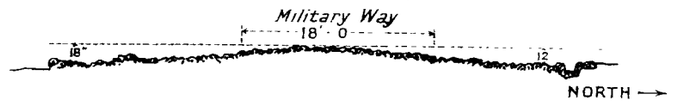
SECTION — Separation of Military Way at Centre Trench of ANNEX.



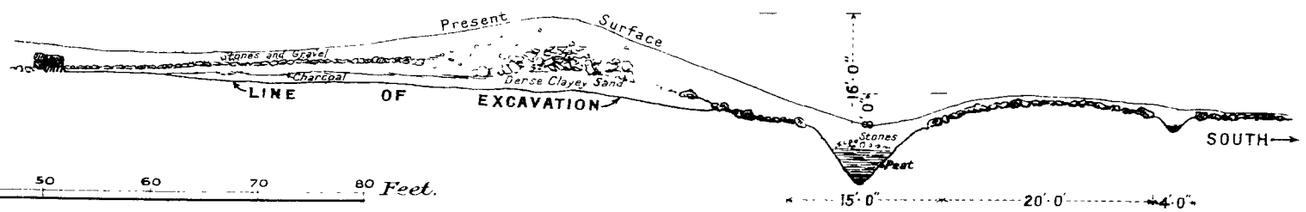
SECTION — SOUTH DEFENCE of ANNEX.



SECTION — Through Paving in ANNEX.



SECTION — Through MOUND, South of Building in ANNEX.

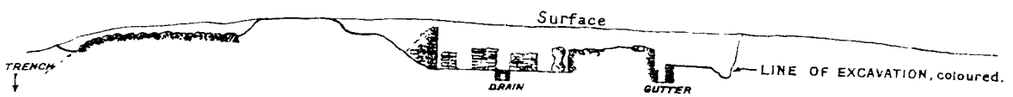


Scale of 10 5 0 10 20 30 40 50 60 70 80 Feet.

BUILDING in ANNEX, Nº 4.



Section through 'A A' looking west.



Section through 'B B' looking north.

Scale of 10 5 0 10 20 30 40 50 Feet.

Jas Watson, photo. Edinburgh.

Mungo Buchanan, Falkirk, delt.

amphoræ. A triangular piece of sandstone (fig. 4), roughly chipped to shape, has a roughly scooped hollow in the centre, as if intended to be used as a lamp.

Architectural fragments.—Four fragments of Slabs with edge mouldings were found. Two have raised flat mouldings, one has a rope moulding within a flat raised moulding, and one has a roll moulding. A slender piece of rope moulding with flat margins is 6 inches in length, and a thin fragment of red sandstone shows carving of curved lines. Part of an inscribed Tablet which was also found has been previously described and figured on p. 472. A portion of a sculptured figure in sandstone (fig. 5), measuring $7\frac{1}{2}$ inches by $6\frac{3}{4}$ inches, seems to be the upper part of the shoulder of a statue about life size. Though carefully looked for, no more of it was found.

Leather.—Portions of the sides and soles of shoes and sandals were found, but none showing features of shape or construction that have not been previously exhibited in the much larger and better preserved collection of these from Castlecary.

Animal remains.—Among these were some Antlers of red-deer, cut and sawn across, Horn cores of an ox, probably *Bos longifrons*, and Tusks of the boar of moderate size.

Analysis of Metals found at the Roman Station, Rough Castle. By Mr R. R. Tatlock, F.I.C., assisted by his Son, Mr Charles Tatlock.

With regard to the yellow metal, the analysis shows that the proportion of lead is very high, that of tin being also much in excess of what is commonly found in modern bronzes. A typical modern bronze usually contains about 88 per cent. of copper and 12 per cent. of tin, and generally no lead nor zinc. In the *Encyclopædia Britannica*, last edition, 4, 367 D, the following occurs under the head of Greek and Roman Bronzes :—

"The Romans also used lead as an alloy in their bronze coins, but gradually reduced the quantity, and under Caligula, Nero, Vespasian, and Domitian, coined pure copper coins; afterwards they returned to the mixture of lead."

It would look as if the Romans used lead for the purpose of softening the metal intended for coining, as without lead the metal would be liable to crack.

With regard to the piece of rusty iron, I found it to be rather strongly magnetic, showing that there was either magnetic oxide of iron present or that there was a core of iron. On testing, no magnetic oxide was found, and on scraping away the crust a core of wrought-iron appeared, of a form that suggested a spear-head, as one end of it was hollow, as if to receive a shaft. Only the crust was analysed, as I did not wish to interfere with the shape of the core, at least in the meantime. The core consists of ordinary wrought-iron, however.

Analysis of a piece of Alloy from the Roman Station of Rough Castle.

	Per cent.
Copper	75·40
Tin	15·52
Lead	9·08
	100·00

	Per Ton. ozs.	dwts.	grns.
Gold	none		
Silver	0	6	12

Specific gravity 7·330

The portion received weighed 546 grains. It was covered over the greater part of its surface with a greenish crust, which weighed 37 grains, leaving 509 grains as the weight of the core, which consisted of pure alloy in the metallic state, which had a fine gold colour.

The crust consisted of carbonate and oxide of copper, but it was not further analysed.

The analysis is that of the pure alloy alone.

Analysis of an Iron object discovered at Rough Castle.

	Per cent.
Peroxide of iron	66·36
Protoxide of iron	none
Silica	18·40
Alumina	traces
Sulphuric Acid (combined)	·62
Sulphur (combined, as Pyrites)	·32
Water (combined)	14·30
	100·00

The specimen consisted of a metallic iron core, encased in an incrustation of oxide of iron, which had evidently been produced exclusively by the oxidation of the metal.

The total weight of the specimen was 1617 grains, and of the crust 740 grains, leaving 877 grains for the pure metallic core.

The analysis is that of the crust alone.

XII.

SUPPLEMENTARY LIST OF TRAVELS AND TOURS RELATING TO SCOTLAND, WITH INDEX.

By Sir ARTHUR MITCHELL, K.C.B., etc.

(Being an Addition to the List printed in Vol. XXXV. of the *Proceedings of the Society of Antiquaries of Scotland.*)

Introductory Note.

What was said in the Introduction to the first List applies largely to this Supplement, and a repetition is unnecessary. There are no new points to which I desire to draw attention.

The second List, like the first, is chronological in its arrangement within itself, but an Alphabetical List of Authors is given as an Index.

The two Lists constitute, I think, when taken together, a fairly complete List of the Travels which have been made in Scotland. For a considerable time I have found nothing to add, and it does not seem to me that I shall gain by further waiting. No doubt there exist narratives of Tours in Scotland which I have not succeeded in finding, but their number I believe to be small. It is impossible, of course, to make a List of this character which is quite complete.

The whole number of items in the two Lists is 1012, a number vastly beyond what I expected when I began to make the collection. (Two numbers are starred.)

The Supplement includes (1) Accounts of Travel in Scotland which are still in manuscript, and to each one of these I have appended a Note indicating the contents and character; (2) Short Accounts of Travel which are to be found in Magazines; and (3) Accounts of Travel which form parts of books relating chiefly to other subjects. The great majority, however, of the items in the Supplement consists of short independent narratives of travel, often of little value as a whole, yet sometimes containing an out-of-the-way notice of what has escaped the eye of other travellers.

As regards the date of the items in the Supplement, 3 are earlier than 1600, 10 are between 1600 and 1700, 3 between 1700 and 1750, 11 between 1750 and 1800, 47 between 1800 and 1850, and 78 later than 1850, or 152 in all.

I append a List of such Errata and Omissions as I have discovered in the first List, and I do not think that these will be regarded as numerous or important. The Omissions are chiefly of the nature of desirable additions to the Notes.

ERRATA in First List.

1. No. 43. *Mortyn, Fynes,* in Index should be *Morison, Fynes.* Add to note following No. 43 in First List, the following:—In 1903 Charles Hughes published a book entitled—*Shakespeare's Europa: unpublished chapters of Fynes Morison's Itinerary, being a survey of the condition of Europe at the end of the 16th century.* From a MS. at Oxford, with an introduction, and an account of Fynes Morison's career. 4°, Lond., 1903.
2. No. 74. After M. P. B. at the end of note *insert* [Briot.]
3. No. 106. At the end of note *insert*:—Second ed., 1716, Lond., 8vo.
4. No. 120. Add to note:—I have now seen this book, and find that I should not have included it in the List.
5. No. 150. After 1758, in the last line but one of the note, *insert*:—This translation was by J. J. D. It was in 2 vols., and only four of the illustrations were given. At the end of the note *insert*:—There was also a translation into German, with plates, in 1760, but no place of publication is given.
6. No. 174. After the note *insert*:—An 8vo edition was published by Thos. Brown, Edinburgh, pp. 178, N.D.
7. No. 195. Delete *Qu.* in third line from end of note, and after *Wolcot,* insert *or Wolcott.*
8. No. 254. Add to note:—Published, 8vo, Edin., 1903, James Sinton, editor.
9. No. 297. Add to note:—An 8vo edition was published in Philadelphia in 1809, pp. 317, without plates.
10. No. 320. Add to note:—Another edition with coloured plates in 1819.
11. No. 356. At end of note:—407 should be 405.
12. No. 379. Add to note:—Attributed to Robert Mudie.
13. No. 491. Add to note:—A second edition, 12mo, Lond., 1851.
14. No. 518. Add to note:—*Arran, a Poem* first appeared 8vo, Edin., 1828.
15. No. 564. *Russell* should be *Russel* in both List and Index.
16. No. 660. Add to note:—Another edition in 1870.
17. No. 696. Add to note:—Second series in 1877.

I. Before 1600.

1546. Le Sieur Berteville, au Roy Edouard VI. Récit de l'Expédition d'Ecosse en 1546; et de la Battayle de Muscleburgh. 4to, Edinb., 1825. **861**

1562. Sir James Ogilvie. Diary, in French, of Queen Mary's Journey to Inverness in 1562. MS. **862**

See George Chalmers' *Life of Mary Queen of Scots*, vol. i. p. 126, 1822. Chalmers says that the diary in manuscript was in his library when he wrote. He says that it records the place where she slept every night, and where she dined every day. He does not say that he was the owner of the diary, and it was not sold with his books. Who then owned or now owns it I have not been able to discover. It is said to begin on the 1st of August 1562, the Queen and Court being at Edinburgh on that day.

1563–1566. Military Report of the West March and Liddesdale, with reference to the possibility of the occupation of that portion of Scotland by an English army, prepared and illustrated by an English official between the years 1563–1566. **863**

MS. in the Cottonian Collection, British Museum, Titus c. xii. f. 76 to f. 87. Mr Robert Bruce Armstrong brought it into notice, and has printed a part of the MS. in his *History of Liddesdale, Eskdale, Ewesdale, Wauchopedale, and the Debateable Land* (4to, Edinb., 1883, appendix, pp. cvi–cxvi), and another part, which treats of the districts of Carrick, Kyle, Ayr, and Cunninghame, he has printed in vol. iv. pp. 17–25 (Edinb., 1884) of the *Archæological and Historical Collections of the Counties of Ayr and Wigton*. The first part has four important coloured illustrations.

The name of the writer is not given, but Mr Armstrong thinks that he may have been a Warden clerk, or one of the other officers of the opposite march of England. He had something of the character of an English spy, and his record of what he saw is interesting and valuable.

I have no difficulty in regarding him as a traveller in Scotland.

II. From 1600 to 1700.

1610. Histoire d'un Naufrage sur la Coste d'Escosse. 8vo, Lyon, 1610. **864**

Given by Brunet—supplement—1209—Not seen.

1615. N. D. C. Tooneel. Der Keyseren en Coningen van Christenryck Sedert Den onderganck van het Griecks Keyserdom. vervattende. Hare Beeltenisgen afcomsten ende voornaemste daden. Ende' also t'sommier der Historie van meer dan 150 Jaren herwaerts, bu een vergadent. Nit de geloofs veerdigste Schruvers, door N. D. C. Tot Arnhem, bu Jan Jans, 1615. Folio. **865**

The part of the book devoted to a description of Scotland is small, pp. 152 (misprinted 146) to 154, and it consists mainly of *marvels* picked out of Boece, Buchanan, etc. The author calls Perth (*Prth* he sometimes writes it) *S. Jon*, and he compares Edinburgh to Prague. Von Humboldt told me in 1856 that he placed the beautiful cities of the world in the following order :—(1) Constantinople as seen from the water, (2) Naples, also as seen from the water, (3) Prague, (4) Edinburgh, (5) Rio de Janeiro. There is very little evidence that N. D. C. visited Scotland or wrote regarding it from personal knowledge. He has some things of interest to say about Queen Mary, and he gives portraits of her, of James V., of Francis II., of Darnley, and of James VI. He gives portraits of so many kings as to lead to the book being spoken of as the Book of Kings.

1617. John Adamson. The Muse's Welcome to H. and M. Prince James at his happie return to His kingdom of Scotland, after yeares absence, digested according to the order of His Progress. Fol., Edin., 1618. **866**

1630. Captain John Dymes. MS. A briefe description of the Isle of Leweis . . . . wherein is contained the nature of the soyle, the manners of the people, the several fishings and theire seasons . . . . as it was ordered by certaine of the Lords of His Majesty's Privie Councell. This appears among the State papers—domestic —Chas. I., vol. 180, No. 97. It is printed in the appendix, p. 591, of W. C. Mackenzie's *History of the Outer Hebrides*.—8vo, Paisley, 1903. **867**

It is the account of a travel. Captain Dymes speaks of it as a "Journey," and says he received his directions from Captain John Mason.

A somewhat long account is given of St Mallonny's Chapel in the north of the isle, and of the superstitious practices which prevailed there till Candlemas of the year in which he wrote. Dymes also

refers to the Pygmeys Island, about a mile from the Chapell of St Mallonny, and to the small chapel on it—8 feet by 6 feet—and says that he made a search for the bones of the Pigmies, and found some "which are soe little that my beliefe is scarce bigg enough to thinke them to bee the bones of humane flesh."

1633. William Harvey. **868**

See Robert Willis's *Works of Harvey with Life*, prepared for the Sydenham Society in 1847. Harvey accompanied Charles I. to Scotland in 1633, and again in 1639 (pp. xxvi–xxviii of *Life*), and he has left an account of a visit to the Bass Rock in *Exercise the Eleventh* of his work *On Generation* (pp. 208–211 of *Works*), but he does not appear to have left any record bearing on the customs of the people, their industries, their buildings, or other such matters. The visit to the Bass probably took place during his first visit to Scotland in 1633.

1636. James Gordon. Opuscula Tria. Chronologicum, Historicum, Geographicum, Curis Tertiis novissime lustrata et aucta ab ipso auctore R. P. Jacobo Gordono Lesmoreo Aberdonensi Societatis Jesu Theologo. 12mo, Coloni Agrippin. 1636. **869**

The part descriptive of Scotland is short, pp. 168–9, and the author indicates that he has drawn it largely from Boece, Lesley, and Buchanan. There is little evidence that he travelled in Scotland for the purpose of obtaining information, but he was an Aberdonian, and probably had personal knowledge of the country. He says that *Thule* meant Iceland. In his list of Universities in Scotland he omits Glasgow. He gives Scotland 2 archbishops and 11 bishops. He says that not any part of the *Caledonia Sylva* (*sic*) remains, but that there is a vestige of the name in that of the town *Duncaldern* [Dunkeld] on the Tay.

1641. A Scottish Journie, written by P. J. **870**

This is the endorsement of a MS. in the Bodleian Library described as Tanner MS. number 306, and it is printed in vol. ii. pp. 269–287 of the Miscellany of the Scottish History Society, 1904, edited by C. H. Firth.

It is an account of a pleasure tour from Edinburgh to Glasgow and back, and is interesting from what it says about Linlithgow and Hamilton. It is in verse, and in several parts coarse. Lord Willoughbie was one of the tourists.

1657–1670. James Fraser, Minister of the Parish of Wardlaw (now Kirkhill), Inverness. Triennial Travels, MS., now in the possession of Miss Hilda M. Paterson, of Birkwood, Banchory. **871**

Mr Fraser travelled chiefly out of Scotland. He used main roads, not visiting outlying places, but giving descriptions of nearly all the places he saw. After an absence of three years in England and on the Continent, he returned to Scotland by sea from Gravesend to Inverness.

1689. Manuscript printed in the Trans. Glasg. Arch. Soc., 1st series, vol. i. p. 38, from a transcription by Gabriel Neil. Alexander R—— [The rest of the surname is abraded]. Journal of a Soldier in the Earl of Eglinton's Troop of Horse, 1689. **872**

The to-and-fro route may be thus indicated by a list of places visited, more or less, in order:—Ayr, Glasgow, Stirling, Dunblane, Muthil, Crieff, Dumbarton, Ardencaple, Inveraray, Lochgoil, Kilpatrick, Campsie, Perth, Dunkeld, Glenlyon, Blair Athole, Linlithgow, Chirnside, Dunse, Berwick, Kelso, Haddington, Tranent, Ratho, Currie, Queensferry, Kinross, Strathmiglo, St Andrews, Cupar Fife, Cupar Angus, Braemar, Coulmakyle, Strathspey, Badenoch, Lochaber, Inverlochy, Lochgarry, Perth, Stirling, Bathgate, Monkland, Linton, Peebles, Selkirk, Kelso, Jedburgh, Carlisle, etc.

1689–1699. The *Lightning Columne*, or Zea-Mirrour, containing the Northern, Eastern, and Western Navigation. Setting forth in divers necessare Sea-Cards all the Ports, Rivers, Bayes, Roads, Depths, and Sands. Very curiously placed on its due Polus height furnished . . . . As also the situation of the Northernly Countries as Islands, the Strate Davids . . . . and Nova Zembla. Adorneth with many Sea-Cards and Discoveries . . . . *Amsterdam, pr. by C. Lootsman, Bookseller in the Lootsman upon the water*, 1698.

THE LIGHTNING COLOMNE, or Sea-Mirrour, contaighningh the Sea-Coasts of the Western Navigation . . . . 1699.

LIGHTING COLOM of the Midland Sea . . . . . from the narrowest of the Streat unto Alexandrette in the Levant 1689. **873**

The book, a large folio, contains 84 folding charts and numerous cuts in the text. There are two engraved titles.

In the chart of the East Coast of Scotland, *Edenburgh* is shown on a wide river; *Lict* is placed close to *Seaton*, and *I. Heinshieff* still further east; while *Monros* and *Aberdin* are on estuaries nearly as large as the Firth of Forth. The spelling of the names of places is

often unusual, curious, and interesting. The varied spelling of the same word on the title-pages is also interesting. Some of the descriptions of the places mentioned indicate that they had been visited. The book is said to have been compiled by Henry Doncker, Caspar Lootsman, and Henry Goos. There is an indication that it was first printed in 1680—perhaps in Dutch.

III. From 1700 to 1750.

1705. Joseph Taylor. A Journey to Edenborough in Scotland, by Joseph Taylor, late of the Inner Temple, Esq. Now first printed from the Original Manuscript. With Notes by William Cowan. 8vo, Edinb., 1903. **874**

Abusive of Scotland. J. T. can scarcely be said to have visited any place but Edinburgh: he entered Scotland by Berwick and left by Carlisle; and was accompanied by Mr Harrison and Mr Sloman. Nothing is known of them.

1714. James Hart—Journal of. **875**

Privately printed, 4to, Edin., 1832, Principal Lee being the editor. Hart was one of the Commissioners from the Church of Scotland to congratulate George I. on his accession. He went south by Kelso, and returned by Moffat. The account is curious in details.

1737. A. J. Bricknell. Oxford to Edinburgh and back in 1737. In the Antiq. N. S. 33: 207 (1897). **876**

IV. From 1750 to 1800.

1750. [John Campbell.] Account of the White-Herring-Fishery in Scotland, carried on in the Island of Zetland by the Dutch, containing the Method they use in catching the Herrings, Account of their Way of Curing etc., and a Description of the Island, by a Gentleman who resided five years on the Island. 8vo, Lond., 1750. **877**

Attributed to John Campbell, LL.D. It may be regarded as an account of travel. It is at least a narrative by a visitor who spent five years in the place. It was reprinted in Edinburgh in 1885.

1753. Captain John Barlow, MS. (Additional MSS., 35891 British Museum.) Printed in the Appendix to W. C. Mackenzie's *History of the Outer Hebrides*, 8vo, Paisley, 1903. Letters from the Hebrides, dated 30th June 1753, 9th October 1753, and Summer 1753. **878**

These letters constitute an account of travel, and they contain much topographical and other matter.

1758. Brieven . . . . uyt Noord-Schotland . . . . behelzende een bericht omtrent de Hooglanden : de costuymen en levenswyre der Berg-schotten ; een beschrÿving der hoofstad van Noord-Schotland, enz. 2 vols., 8vo, Haarlem, 1758. With 4 plates. **879**

1773. Constantine John Phipps. A Voyage towards the North Pole in 1773, undertaken by H.M.'s Command. 4to, Lond., 1774. **880**

Contains a reference to Shetland, visited on the way north. Not important.

1780. Uno Von Troil. Letters on Iceland, etc. 8vo, Lond., 1780. **881**

Given also in Pinkerton's *Collection*, vol. i. References to Staffa, etc., visited on the way north.

1780. Thomas Ford Hill. "An Excursion of some months in the Highlands in the summer of 1780," in quest of material relating to the Controversy about Ossian. **882**

Mr Hill says that he himself "scarcely understood six words" of the Erse language, and this greatly impairs the value of the outcome of his quest. He visited many places :—Perth, Dunkeld, Athol, Taymouth, Dalmaly, Inveiera, Loch Lomond, Dumbarton, Glasgow, Hamilton, Lanark, Linlithgow, Stirling, Forfar, Brechyn, Stonehaven, Aberdeen, Strathspey, Elgin, Inverness, Fort Augustus, Fort William, Tiendrum, Glen-Co, Lochern, Dunblane, Alloa, Edinburgh, Loch Etive, Oban, Mull, Icolmkill, Morvan, and Loch Awe. He thus travelled very widely, but his narrative contains scarcely anything that does not relate to the Ossian Controversy. He made three tours apparently during one year. In all his wanderings he never met with a copy of Macpherson's Ossian. The print contains many copies of Gaelic verse collected by Mr Hill. It is a reprint, pp. 34, from the *Gentleman's Magazine*, 1782–3. Hill died in 1795. He wrote *Ancient Erse Poems*, 8vo, Lond., 1784.

1785 *circa*. John Knox. Remarks on a short Tour of Scotland, comprehending the Southern Division of that Kingdom and a considerable portion of the Highlands. **883**

In vol. ii. p. 556 of the 3rd edition of Knox's *View of the British Empire, more especially Scotland*. 8vo, Lond., 1785.

1785. V. Lunardi. An Account of Five Aerial Voyages in Scotland . . . . 8vo, Lond., 1786. **883***

Full of matters relating to Manners and Customs, Topography, Families, etc. Not given in Lowndes, Watt, or Allibone.

1791–2, MS. **884**

This travel, though partly made in one year and partly in another, may be regarded as one tour. It extended over the counties of Dumfries, Ayr, Renfrew, Lanark, Midlothian, Dumbarton, Argyll, Stirling, Perth, Forfar, Fife, Kinross, Clackmannan, Aberdeen, Moray, Inverness and Ross, and over a part of the Lake Country of Cumberland. Most of the journeyings were on horseback. The miles travelled were 2037. The character of 81 inns is given, as *excellent* in regard to 4, as *good* in regard to 36, as *poor* in regard to 23, and as *wretched* in regard to 18. The account of the travel occupies 309 closely written octavo pages.

The traveller's attention was mainly given to beauties of scenery, and this he describes effectively. The kinds of scenery were to him either *magnificent*, *beautiful*, or *mixed*. "Stupendous fantastic mountains," "lofty rocky ridges and crags," he admired, but much less enthusiastically than "lakes with wooded isles," "soft clothed acclivities," "green banks and heathy ridges," and "winding wooded vales." Very much of the narrative is occupied with well-worded descriptions of scenery. There are no incidents, and very few objects are specially noticed. Verses occur now and then—some apparently by the traveller himself, as for instance an *Address to a Whimpering Rill by its Parent Water* (p. 86), an *Ode to Hygeia* (p. 72), a *Sonnet to the Ruins of Benlomond* (p. 173), and *Adieu to the Valleys of Broadalbane* (p. 280); but he also gives some verses which he saw "on a window at Tyndrum," and the lines which were written by Burns on the window of the Carron Inn. He refers to the "venerable ash" in the churchyard of Bonhill, said to be the largest in Europe, and to the larch at Dunkeld, which was "planted out" from the greenhouse in 1741, and in 1791 measured 9½ feet in girth at 4 feet from the ground. He describes what he calls "the picturesque huts" at Corieburgh (Argyll), and says that they are formed in the following manner: An oval spot is enclosed with poles stuck into the ground, and fresh turf is built around the poles to the height of six feet. A roof with a gentle slope is put on this wall and covered with grassy turf, and as care is

taken to lay the sod outwards, the whole building when finished, except the door and window, is covered with verdure, and seems to be a cave dug into a grassy knoll. When the grass continues to grow, these huts are said to be most beautiful and picturesque, but, such is the connection between beauty and deformity, to be the ugliest of hovels when it fails. At Portmoak he saw the residence and burial-place of Michael Bruce, the poet. He says that in the Portmoak churchyard he saw no monument that could belong to Bruce's family, except a plain stone on which was inscribed "1767 J.B. C.M." He saw the cottage in which Bruce expired, and in which his mother still resided, and says it had no resemblance to the house described in the *Mirror*, and wonders how "such wretchedness could have produced a mind so refined." With reference to the quadrangular stone, raised a little from the ground, which was pointed out to him as being over the grave of St Margaret, he says that at the corners of the stone are four circular hollows, in which were placed the candles said to have been, at one time, burned night and day on the tomb. He says that the most remarkable thing about the Cambuskenneth buildings is "a round aperture, four feet in diameter, in the floor of the upper or roof of the lower apartment." On one thing that came under his observation he dwells at much greater length than on any other, namely, an inexplicable sound which occurs in a chapel on the site of the south aisle of the Paisley Abbey. He thus refers to it:—"On the site of the south aisle, a predecessor of the Marquis of Abercorn erected at the Reformation a burial-place for his family. It is a little oblong chapel, with a lofty and arched roof, and a floor flagged with stone, beneath which is the vault where the remains of the Abercorn family are deposited. This chapel communicates, by a small aperture in the common wall, with the garret of a house, which very probably was built at the same era, and the construction of the chapel and adjoining garret is such as to produce a most extraordinary phenomenon in sound; for on shutting the door of the chapel a noise is heard overhead, by those who are within the walls, resembling, and loud as, near thunder, and on sounding musical notes in slow series, each note is so frequently and so loudly repeated as to produce a very singular kind of harmony. No satisfactory account of this phenomenon has ever been given."

The traveller spells Ailsa, *Isleseg*.

The manuscript, bound in red morocco, was in Whyte-Melville's library, and is now in my possession. It is apparently written by one whose initials were G. S., and whose home was at Northbar, in the parish of Inchinnan. It is possible, therefore, that he was a member of the Semple family.

1796–8. G. M. Woodward. Eccentric Excursions. With more than 100 coloured plates. 4to, Lond., 1796–8. **885**

Another edition, 4to, Lond., 1807, and another, 4to, Lond., 1816. Part of the book relates to Scotland, and has curious plates. It is a rare and costly book.

1797. Latocnaye, De. Promenade d'un Francais dans L'Irlande. 8vo, Dublin, 1797. **885***

Contains a chapter, pp. 255–278, entitled "Petite Visite à l'Écosse." This is a second visit to Scotland by Latocnaye. See No. 229.

V. From 1800 to 1850.

1800. A Journey to the Western Islands of Scotland. Vignette title. 8vo, Alnwick, 1800. **886**

1801–2 *circa*. Travels of Viator in Scotland. **887**

James Anderson's *Recreations in Agriculture, Natural History, Arts, and Miscellaneous Literature.* Vol. V. 1801. p. 475. Vol. VI. 1802, pp. 101–116, 211–224, 262–278, 460–476.

1802. [Rev. David Brown.] Voyage to the Western Highlands. A Tour in Scotland in 1802. By D. B., Crailing. **888**

In the *Scottish Antiquary* for July 1902.

1802. F—k R—w. Account of a Pedestrian Journey in 1802. **889**

In the *North British Magazine and Review* for 1804, part i. p. 91. The traveller proceeded from Edinburgh to Queensferry, Kinross, Dunkeld, Blair in Athole, Rumbling Bridge, Crieff, Dumblain, Stirling, Alloa, Culross, Dunfermline, and back to Edinburgh.

1803. A. S. Topographical Account of some parts of the West Coast of Scotland. **890**

In the *North British Magazine and Review* for 1804, part ii. pp. 43–48 and 81–84. Tour from Greenock to Skye, Oban, etc.

1803–4. Notice descriptive sur l'Angleterre, l'Ecosse, et l'Irlande. 3 vols., 8vo, Paris, 1803–4. **891**

1804. P. N. Tour through Orkney and Shetland. **892**

Scots Magazine. Begun in November 1804, and finished in August 1805.

1804. Memorandums of a Pedestrian Tour in some of the Southern Counties of Scotland. **893**

In the *North British Magazine and Review* for 1804, part ii. pp. 195–206, 263–272, and 359–363.

The traveller visited Dalkeith, Peebles, St Mary's Loch, Selkirk, Melrose, Kelso, Ednam, etc.

1805. Journal of an Excursion in the Counties of Stirling, Perth, and Kinross. **894**

Appears in the *Scots Magazine* for Sept., Oct., and Nov. 1805.

1807. John Fleming, Bathgate. Remarks made on a Tour to Arran during May and June 1807. **895**

This account of a Travel in Scotland appeared in the *Scots Magazine*, vol. lxix. (1807), pp. 729-33, 821–25, 897–900, and vol. lxx. (1808), pp. 19–23, 95–9.

1809 *circa*. Gleanings of a Wanderer in various parts of England, Scotland, and Wales. 8vo (Richard Phillips), Lond., 1809. **896**

1810. George Skene Keith, D.D. Short Account of two Journies undertaken with a view to ascertain the Elevation of the Principal Mountains in the Division of Marr. **897**

Appears in George Skene Keith's *General View of the Agriculture of Aberdeenshire*. 8vo, Aber., 1811, p. 641.

1810–1814. Journal of Itinerating Exertions in some of the more destitute parts of Scotland. 8vo, Edinb., 1814. **898**

This is an account of peripatetic "efforts to promote the knowledge of Jesus Christ," and consists of little more than the record of where sermons were preached, whether in Gaelic or English, what the size of the audience was, and what was said to or by persons on religious subjects.

Mr Sinclair and Mr Gibson were set apart for the work, and the Journals were written by them. The book is in 5 parts, each part referring to a separate year. In the second Introduction we are told that about 35 years ago there was no carriage road in Islay, and not more than 2 or 3 carts, and that in 1811 there were 90 miles of carriage road and from 500 to 600 carts. At page 12 of the 1811 Journal there is a note about Corvvrekin, and throughout there is

much about the want of education. In the Introduction of the 1812 Journal reference is made to the large number of churches and chapels that at one time existed in the Hebridean Islands, 12 in Harris and 15 in Coll and Tiree. The elders of the church are called *seniores*. Smallpox was often encountered. The old name of Tiree is given as Rioghachd bharrthonn, that is, the Kingdom rising from the Waves.

1811. John Wallis. Tour through the United Kingdom of England, Scotland, and Ireland, 1811. **899**

Not seen.

1816. Alexander Campbell. One of the David Laing MSS. now in the Edinburgh University Library. **900**

It is entitled :—Notes of my third Journey to the Borders [1st 1796 and 2nd 1811]. It was begun on the 8th October and ended on 31st October 1816. It is principally devoted to notices of Border pipers of the 18th century, and includes an account of the celebrated James Allan, the Northumberland piper. Campbell visited Peebles, forded the Tweed to Horsburgh Castle, met William Laidlaw and James Nicol at Traquair, and James Hogg at Yarrow, went with the last to St Mary's Loch and Ettrick, where he made a sketch of the cottage in which Hogg was born. He visited Selkirk, Scott at Abbotsford, Scott of Maxpopple, Scott of Mandilaw, Shortreed at Jedburgh, Lady Grace Douglas at Cavers, and but for an attack of gout would have gone on to Liddesdale, instead of which he went on to Hawick, taking thence the coach to Edinburgh, which he reached at 6 A.M. on Thursday the 31st October.

The notes are made up of references to persons rather than localities.

A part of the Journal is given in the *Additional Illustrations* by David Laing to Stenhouse's *Lyric Poetry and Music of Scotland*, 1853, pp. 378–380.

1816. Alexander Campbell. Journal of a Tour in the Scottish Border in 1816. **901**

Read by James Sinton at a meeting of the Hawick Archæological Society, 16th February 1904. Only 25 copies printed separately. Original MS. in the David Laing Collection of MSS. in the Edinburgh University Library.

1817. MSS. of 57 closely and well-written large 8vo pages. No name of author, and only once a date—1 Nov. 1817. Terminates abruptly. The writer, an educated man, but travelling as a beggar,

and sleeping often in barns, hay-lofts, cart-sheds, and common lodging-houses. Begging for food and clothes. His purse often nearly empty—says once that all he had was a shilling and some pence. Occupied himself with sketching in black and white and water colours. Sketched poorly, judging from the examples in the narrative. Writes fairly good English. Very appreciative of fine scenery. Describes minutely the towns of Dundee and St Andrews. Troubled with occultism, eccentric, or of disordered mind. Heard voices, and got mysterious directions as to his route and other things. Begins with the Trosachs, and goes on by Dunkeld to Dundee and St Andrews. Speaks of travelling in England, and seems to have been *on the road* for two years. Is probably a Londoner. Here and there small portions of the narrative in shorthand. Calls a market cross a market pole. Saw only one civilian dressed in a kilt. Now and then, but not often, is a little coarse. MS. in the keeping of Dr Mungle, Kinross. Not of interest or value. Said to have been found early in 1818 by a workman engaged in repairing the Lodge at Ayton House, Abernethy, Perthshire. **902**

1820. Tour in the Highlands of Scotland. *Monthly Review*, vol. xciii. p. 390. **903**

1822. A complete historical account of the Visit of His Majesty King George the Fourth to his Kingdom of Scotland, August 1822, with a full detail of all interesting circumstances connected with the visit. To which is added an Appendix containing notices of the Highland Clans, etc. etc. 12mo, pp. 216, Edin., 1822. **904**

A portrait of George IV., taken from Brighty's portrait, is given as a fronti-piece; not the same book as No. 379.

1822. M.S., R. T. W. Taylor. Tour in Scotland. Acquired by me from Joseph Davis, Librarian of the Free Reference Library, Bath. A volume in leather, small 8vo, 140 folios. **905**

R. T. W. Taylor travelled with his father. He was a member of the University of Oxford. About the Hunterian Museum in Glasgow he writes:—"A ticket of admission cost 2s., unless the visitor be a member of the University of Oxford or Dublin, when he has free access during the hours it is open. I had paid the admission fee, but when I entered my name in the Strangers' Book as a member of the University of Oxford, the porter immediately returned the money." About St Bernard's Well he says:—"The charge for a glass of water is *one penny*. Spitting on the sacred spot is considered profanation, and a fine of sixpence is imposed upon those who are guilty of such a breach of decorum." Snuff, he says, was handed round in church at the Gaelic service at Inverary; and the next evening, under a dancing-master, who comes no more than once in two years, he saw the lads and lassies tripping together. Some joined in the favourite national dance, and some were learning the more fashionable quadrille. He went to "New Lanark," to the Trosachs, etc. He had a breakdown on the Glasgow steamboat on the Clyde. The customs of the New Year's Day are described.

1822. Visit of George IV. to Scotland. *Blackwood's Magazine* for Sept. 1822. **906**

1822. [Robert Mudie.] Account of Visit of George IV. to Scotland. Plates and plan, 1822. Entered anonymously as No. 379. **907**

1824 and 1828. Mrs Hughes (of Uffington). Letters and Recollections of Sir Walter Scott. Edited by Horace Hutchinson. 8vo, Lond., 1905. **908**

Contains accounts of two tours through Scotland and two visits to Abbotsford. The travel was somewhat extensive, and the account is very interesting. The narrative is in the form of a diary, and the entries are full.

1825. Fragments containing a Voyage from Aberdeen to Edinburgh. Aberdeen, 1825. **909**

1825. D. A Visit to Annan and Gretna Green in 1825. *Edinburgh Magazine and Literary Miscellany* for Jan. 1826, pp. 39–43. **910**

1825. Three Days' Walk in the Highlands. *London Magazine*, vol. xv. p. 542. **911**

1827. John Watt. Poems in the Scottish Dialect. 8vo, Edin., 1827. **912**

The first poem is called *Journey to Edinburgh*, but there is very little in it that can be called topography.

1828. Alex. Laing. The Donian Tourist. Aberdeen, 1828. **913**

1830. Marquis de Custine. Mémoires et voyages, ou lettres écrites à diverses époques pendant des courses en Suisse, en Calabre, en Angleterre, en Écosse. 2nd edition. 2 vols., 8vo. Paris, 1830. **914**

1832. W. Etty, R.S.A. MS. Letter to Thomas Hamilton, Architect, (27th Dec. 1832), now in my possession. **915**

It begins with referring to differences of opinion that had arisen as to the placing of his large pictures in the Academy, and it then goes on to give an account of a journey from Edinburgh to Glasgow by coach, by steam-packet down the Clyde to Dumbarton, thence by coach to Loch Lomond, and to the top of the loch by steamboat, which was reached in a Lighter. The scenery of the loch is described. The return to Glasgow was by steamer. Thence he went to Lanark and saw the Falls of Clyde. Afterwards he journeyed home, visiting on his way the Lakes of Cumberland and Westmoreland.

There is nothing remarkable in Etty's short account of his little travel, but all he says of it is prettily said.

1833. William Dobie, of Grangevale, Beith. MSS. Fragments of Perambulations in Kintyre in the summer of 1833. **916**

A manuscript bequeathed by Mr John Sheddon Dobie to the library of the Society of Antiquaries of Scotland in 1903. Small folio, pp. 172, exclusive of map and full-page drawings.

It is a neatly written account of travel over a limited district of Scotland by an accurate observer, and his record is full of interest. Perhaps there is too much flowery wordiness in it, but this is more than compensated by solid observation. Tombstones, not always very old, received much attention from the traveller, and he gives many of the inscriptions in full—thus doing for a small portion of Argyllshire what Andrew Jervise did for the north-east of Scotland. But he also describes old sculptured grave-slabs of the West Highland Celtic kind and fragments of old Celtic crosses: gives details of the condition of many old ruined chapels, and describes with care and fulness the old Castles of Saddel and Skipness. His book is illustrated by cleverly executed drawings, which are numerous.

He began his travels on the 10th of June, and ended them on the 18th July, 1833.

He gives a drawing of a curious carved stone at the Well of St Kieran; speaks of vitrified forts at Carradale and Dunskeig; refers to circular duns at Rainachan and Dunskeig; describes a solid stone coffin at Kilhouslan; saw a wattled partition in a house at the Southend; speaks of disused salt-pans at Mahairnnish; found more than one epitaph on tombstones in Gaelic, which he gives; came across gravestones, of no great age, with emblems on them of the occupations of those buried below, such as the plough, the anvil and hammer, etc.; fell in with the following mottoes on tombstones:—"By hammer and anvil all things stand," and "Success to the plough"; gives an account of St Coivin's way of divorcing; tells that water from Barbrec's Well was at one time sent to Glasgow; says that the *Reliefs* at Campbelltown bury their dead in a cemetery apart; etc.

1833-4. Grant Thorburn, Seedsman, New York. Men and Manners: or, a Bone to Gnaw for the Trollopes, Fidlers, etc. Being notes from a journal on sea and on land in 1833-34. 12mo, Glasgow, 1835. **917**

In Scotland, Dalkeith, Edinburgh, Glasgow, Stirling, Linlithgow were visited; and buildings, institutions, etc. in them are described, as are also customs, manners, etc., but not by a person well qualified for the task.

1838. Sporting Ramble in Scotland. *Bentley*, vol. iii. p. 137. **918**

1840. Ann Walker. Dr Trueman's Visit to Edinburgh in 1840. His introduction to the Religious World, so called; or a series of Dialogues illustrative of the ways, manners, and conversational powers of Ladies engaged in active duties of benevolence. To which is added a second edition of Mrs Bountiful, or Edinburgh Charities. 8vo, Edinb., 1841. **919**

This book is inserted in the list with much hesitation. It is not an account of any real visit. It is an imagined visit. There is no cleverness in the book, nor any instruction. No charitable institution in Edinburgh is described in a way which can be of any use.

1840. William Howitt Visits to Remarkable Places, etc. 2 vols., 8vo, Lond., 1840. **920**

Vol. i. p. 51. Visit to Field of Culloden.
Vol i. p. 515. Visit to Kilmorack.
Vol. ii. p. 472. Visit to Berwick-on-Tweed.
Vol. ii. p. 505. A Stroll along the Borders.
Vol. ii. p. 554. Visit to Hermitage Castle.

1841. Eight Tours in Scotland. Outlines. **921**

1842. Andrew Park. The Royal Visit to Scotland. Portraits and engravings. 12mo, Glasg. [1842]. **922**

1842. James Howie. The Queen in Scotland: a descriptive Poem. 12mo, Edinb., 1842. **923**

1842. James Buist. National Record of the Visit of Queen Victoria to Scotland in Sept. 1842, etc. 8vo, Perth, 1842. **924**

1846. Miss E. Allen, Lowthertown. The Beauties of the Border; being a description of the principal Gentlemen's Seats in Cumberland, Annandale, Nithsdale, Galloway, and Ayrshire. 12mo, pp. 104, Annan, 1846. **925**

The descriptions are the outcome of travel, which too frequently led to the making of verse.

1846–1878. Notes from the Royal Botanic Garden, Edinburgh. Nos. vii., viii., ix., x., xii., xiii., and xiv. 1902–1905. 8vo. Edin. **926**

These notes contain interesting accounts of many of the botanical excursions by Professor J. Hutton Balfour and his students, 1846 to 1878, and also of excursions by Mr John Mackay and Mr George Don, both principal gardeners of the Royal Botanic Gardens, Edinburgh. In so far as regards Professor J. H. Balfour's excursions, there is a useful index of places in No. 10. But all the accounts relate almost exclusively to Botany, and have scarcely a reference to anything else, which they might be expected to have, as the travellers were observing and cultured persons. As they are called *Accounts of Excursions*, I have inserted them in this List, but not without some hesitation. It will be observed that the notes are published long after the excursions were made.

1847. Sylvan's Pictorial Handbook to the Clyde, and Watering-places in the Vicinity. A Visit to the Isle of Arran and Ayr. A Day

on Loch Lomond, etc. With maps, and upwards of 50 illustrations by Thomas and Edward Gilks. Sm. 8vo, Lond., 1847. **927**

1848. Sylvan's Pictorial Handbook to the Scenery of the Caledonian Canal, the Isle of Staffa, etc. With map, and upwards of 50 illustrations from original sketches by Thomas and Edward Gilks. Sm. 8vo, Lond, 1848. **928**

1848 Sylvan's Pictorial Handbook to Coila or the Land of Burns. With portrait, and numerous illustrations by Thomas and Edward Gilks. Sm. 8vo, Lond., *circa* 1848. **929**

1848. William Wallace Fyfe. Letters from the Wells. A Visit to Moffat, its Spas and Neighbourhood. 12mo, Edin., 1848. **930**

1849. Ellen M. Reade. Tour in Scotland and the Highlands in 1849, through Edinburgh, the Borders, Perthshire, etc. With two pencil sketches. 24th July, Edinburgh, 1849. **931**

Still in manuscript. Not seen. Present possessor not known.

1850. David Millar. The Tay: a Poem. 8vo, pp. 386, Perth, 1850. **932**

I do not know any book written in verse which can more correctly be called *An account of travel*. The author starts with the Tay in its Highland birthplace, and he most loves it there, but still is Sassenach enough to be glad that there "no Gaelic mars the skylark strain." He follows the river from Killin to Aberfeldy, Dunkeld, Perth, Newburgh, and Dundee, describing many places of interest as he passes them. At the end of each of the five cantos there are useful topographical notes in prose. There is unfortunately no index to the book.

VI. From 1850 to 1900.

1853. Rambles in the British Isles. 16mo, Lond. [1853]. **933**

1854. George Johnston. Our Visit to Holy Island in May 1854. *Proceedings Berwickshire Nat. Hist. Soc.*, 1873–5, pp. 27–52. **934**

1857. The Traveller's Guide through Scotland and its Islands. **935**

1857. [Rev. O. Prescott Hiller.] English and Scotch Sketches. By an American. 8vo, Lond., 1857. **936**

In the Scottish portion the chapters are headed :– The Scotch ; Wallace's Tree ; Tannahill's Hole ; Wilson, the Ornithologist ; The Land of Burns ; A Day's Journey through the Highlands ; Melrose Abbey by Moonlight ; A Scotch Election ; Visit to Jeffrey.

1858. Angling Saunter in Sutherland. *Blackwood's Magazine*, vol. lxxxv. p. 81. **937**

1860 *circa*. [William Keddie.] Staffa and Iona described and illustrated. With notices of the principal objects on the route from Port Crinan to Oban and on the Sound of Mull. 12mo, Glasgow, n.d. (*Circa* 1860.) **938**

1860. Three Weeks' Loafing in Arran. *Macmil. Mag.*, vol. ii. p. 496. **939**

1861. James A. H. Murray. A Week among the Antiquities of Orkney. 8vo, Hawick, 1861. **940**

1861. Tourist in the Hebrides. *Leisure Hour*, vol. ix. p. 645. **941**

1862. A. Smith. Rambling in the Hebrides. *Temple Bar*, vol. iv. p. 481. **942**

1862. Tour in Scotland. *Temple Bar*, vol. v. p. 140. **943**

1863. Nathaniel Hawthorne. Our Old Home. 12mo, Boston, 1863. **944**

Contains a charming paper on The Haunts of Burns.

1864. John Brown. Minchmoor. 8vo, Edin., 1864. **945**

This may perhaps be regarded as an account of travel. Woodcut of Traquair House on title-page.

1864. Notes of a Trip in the Highlands of Scotland. *Chambers's Journ.*, vol. xli. p. 654. **946**

1865. J. Leitch. Three Weeks in Skye. *St James' Magazine*, vol. xv. p. 495, and vol. xvi. p. 78. **947**

1865 *circa*. J. Leitch. Across Ross-shire. *St James' Magazine*, xvii. 316, 340, and xviii. 43. **948**

1865. A Stroll to Cairnie. Keith, 1865. **949**

1865 A Holiday on the Border. *Victoria Magazine*, vol. v. p. 42. **950**

1866. W. Chambers. My Holiday on the Coast of Scotland and Isle of Man. *Chambers's Journal*, vol. xliii. pp. 593, 612, 632, and xliv. pp. 561, 619 **951**

1867–8. Heinrich Brockhaus. Reisetagebuch aus den Jahren 1867 und 1868. 2 vols., 8vo, Leipzig, 1873. **952**

Vol. i. pp. 141–205 contain accounts of visits to Edinburgh, Alloa, Perth, Errol, Ballater, Braemar, Dundee, Inverness, Oban, Tarbet, Callander, and Glasgow; and vol. ii. pp. 294–316 contain accounts of visits to Edinburgh, Granton, Lerwick, Kirkwall, Stromness, Wick, and Forres.

1868. Weather-bound in Shetland. Lerwick *via* Aberdeen. *Standard* newspaper, 2nd Sept. 1868. **953**

1868. M. W. R. Our Jaunt to Gight. [Aberdeen] 1868–9. **954**

1869. Hugh Macmillan. Holidays on High Lands; or, Rambles and Incidents in search of Alpine Plants. 8vo, Lond., 1869. 2nd edition, 1873. **955**

1870. Epsom E. Middleton. The Cruise of *The Kate*, a single-handed Voyage in a Yacht round England to Leith. Illustrated. 8vo, Lond., 1870. **956**

1871. Rambles in Edinburgh. *Fraser's Magazine*, vol. lxxxiv. p. 458. **957**

1872. Visit to Abbotsford. *Temple Bar*, vol. xl. p. 329. **958**

1873. Charles A. Cooper, Editor of the *Scotsman*. A Find in Fife. **959**

Reprint from the *Scotsman* of 14th August 1873. The "*find*" was Elie.

1873. Cruise in Waters of Scotland. *Once a Week*, vol. xxviii. p. 494. **960**

1873. D. Croal. Sketches of East-Lothian. 8vo, Haddington, 1873. **961**

Contains *A Drive to Lauder*, and accounts of excursions to various other places in the country.

1874. James Clement Moffat. Song and Scenery: or, a Summer Ramble in Scotland. 12mo, New York, 1874. **962**

1874. Francis Francis. By Lake and River. An Angler's Rambles in the North of England and Scotland. 8vo, Lond., 1874. **963**

1876. John Miller Gray. Notes of Holidays in Arran. **964**

The Notes first appeared in the *Edinburgh Courant* of 17th August 1876, and they are reprinted in the *Memoir and Remains of Gray*, pp. 125–131 of vol. ii. (8vo, Edinb., 1895). They are an account of two ascents of Goatfell to see the sun rise and the sun set, and are with some difficulty regarded as an account of travel in Arran.

1876. E. Yates. Holiday Tour in Scotland. *Temple Bar*, vol. xviii. p. 414. **965**

1876. Trip to Shetland. *Chambers's Journal*, xxxi. 97, 124, 137 (1876). **966**

1876. Tour in the Highlands. *All the Year Round*, vol. l. pp. 13 and 276. **967**

1877. Rev. John H. Thomson, Eaglesham. The Martyr Graves of Scotland: being the Travels of a Country Minister in his own Country. Second series. 8vo, Edinb., 1877. **968**

Contains accounts of visits to thirty-five graves. The first series, No. 696, contains accounts of visits to twenty-two graves. Illustrated.

1879. Rambles round Kilmarnock, with an account of the Burns Monument Inauguration, by A. R. Adamson. 8vo, 1879. **969**

1880. Visit to Fyvie and Gight. Banffshire Field Club. **970**

1880. [B. Gillies.] A Border Raid, personally and topographically conducted; being Notes of a Pedestrian Excursion to Tweedsmuir, Annandale, Eskdalemuir, and Liddesdale. 8vo, Aberdeen, 1880, pp. 35. Hermitage Castle as frontispiece. **971**

1880 *circa*. Colonel John Robertson. Ind O Scot. 8vo, Lond. N.D. **972**

It is difficult to justify the inclusion of this book among travels in Scotland, but I find it is spoken of as a tour, and I therefore give it a place in the List. It is a product of the imagination, and nearly altogether, I think, without value in any respect, but certainly of no value as a source of topographical information. The meaning of the title I have not discovered, nor do I know whether the name of the author as given is a real name.

1883. Notes of a Wanderer in Skye. *Temple Bar*, vol. lxix. p. 75. **973**

1883. P. Q. Keegan. Visit to Orkney and Shetland. *Colburn New Monthly Magazine*, clxxi., 401. **974**

1884. Rambles on the Banks of the Ayr. By Rab the Rambler. **975**

1884. Louis Wiesener. Souvenirs d'Écosse. 8vo, pp. 73, Paris, 1886. **976**

M. Wiesener came to Scotland to examine the Stair Papers in connection with an historical work which he was then engaged in writing. He was for some time at Oxenfoord Castle, and he visited Edinburgh, Glasgow, Loch Leven, Stirling, Loch Katrine, Loch Lomond, Galashiels, Melrose, and Abbotsford.

1885. Excursion to Langholm Lodge and Canobie, etc., in 1885. 8vo, pp. 40. **977**

Printed by the Scottish Arboricultural Society.

1885. Loch Skene and the Ettrick Forest: an Angler's Mountain Ramble. N.D., N.A. **978**

1885. R. P. B. Frost. Visit to Skye. *To-day*, vol. iii. p. 11. **979**

1886. Cairngorm Wanderings from the Shelter Stone. *Aberdeen Free Press*, 13th Aug., 2nd, 9th, 15th, 21st Sept., 1886. **980**

1887. Twixt Spey and Dee. *Northern Figaro* (Aberdeen), 20th, 27th Aug., 3rd, 10th, 17th Sept., 24th, 1st and 8th Oct., 1887. **981**

1887. A Nest Hunt among the Grampians. *Good Words* for May 1887. **982**

1887. Excursion to Banff. Aberdeen Philosophical Society. **983**

1888. Mary King Waddington. Letters of a Diplomat's Wife. Illustrated. 8vo, Lond., 1903. **984**

Contains an account of a visit to the North of Scotland in August 1888.

1888. James Mackintosh Gow. Holiday Notes in Cowal, Argyllshire, and in Arran, 1888. *Proceedings of the Society of Antiquaries of Scotland*, xxiii. p. 107. **985**

1888. Camastronary: a Skye Trip. Aberdeen, 1888. **986**

1888. Excursion to Teviotdale. 8vo, pp. 23. **987**

Printed by the Royal Scottish Arboricultural Society.

1888. Pilgrimage to Iona. *Cornhill Magazine*, vol. lviii. p. 122. **988**

1889. James Mackintosh Gow. Holiday Notes in Athole, Perthshire, 1889. *Proceedings of the Society of Antiquaries of Scotland*, vol. xxiv. pp. 382–387. **989**

1889. From the Druie to the Geldie: a circular Mountain Tour. *Aberd. Journ.*, 17th and 24th June 1889. **990**

1889. Sir George Douglas, Bart. Travels in Home Counties. **991**

This account of travel appeared in the November and December numbers of the *Scots Magazine* for 1889. It is a narrative of a riding and walking tour in the counties of Roxburgh and Dumfries.

1890. A Morning on the Grampians. *Blackwood's Magazine*, Sept. 1890. **992**

1891. Vagor; or, Vicissitudes of a Vagabond. Edited by Joseph M'Vittie. 8vo, Albion, N.Y., 1891. **993**

The opening chapters contain some references to Scotland. Caerlaverock, Nith, Solway, Repentance Tower, Bankend, Tinwald, Kirtle, Creac Moss, and Hoddam are mentioned, but there is nothing descriptive of the places. It is a poorly edited book of little value, and it is perhaps difficult to justify its appearance in a List of Travels in Scotland, though it is spoken of as a tour.

1891. J. F. Hunnewell. The Lands of Scott. Portrait and maps. 8vo, Boston, U.S.A., 1891. **994**

Descriptive tours in Scotland, etc., to scenes of Scott's novels and poems.

1891. Malcolm Ferguson. Rambles in Breadalbane. 8vo, Glasgow, 1891. **995**

Portrait of the author in Highland costume as frontispiece; portrait of big Donald M'Laren; cairn on Ben Lawers; Black Watch cairn at Aberfeldy; mural monument in Weem kirk; and Wade's bridge at Aberfeldy, as illustrations.

1893. [A. E. Murray.] St Pauls to the Highlands and back. Lond., 1893. **996**

1894. M. Ferguson. Trip from Callander to Staffa and Iona. Illustrated. 8vo, 1894. **997**

1894. A. Goodrich-Freer. Outer Isles. With illustrations by Allan Barand. 8vo, Lond., 1903. **998**

Notes on the islanders, and on legends, superstitions, folklore, etc.

1897. [J. H. Macgregor.] Fort William to Glasgow on foot. *Christian Leader*, 15th, 22nd, and 29th June 1899. **999**

The walk took place in 1897.

1898. J. H. M. (J. H. Macgregor). From the German Ocean to the Atlantic, on foot. *Banffshire Journal* of 1st, 8th, 15th, and 22nd Jan. 1901. **1000**

The walk took place in 1898.

1898. Hugh Macmillan. A Holiday on Lochtayside. *Chambers's Journal*, vol. lxxv. p. 389 (1898). **1001**

1900. Adam Laing. Branxholme Castle and the Land of the Scotts. A drive through Upper Teviotdale, from Hawick to Mosspaul. 12 plates. 8vo, Hawick, 1901. **1002**

1901. J. Garry. A Hebridean Holiday. *Temple Bar*, 124: 321 (1901). **1003**

1902. R. Blair. Falkirk and its Neighbourhood. Illustrated. (The Record of a Visit, 1st and 2nd July 1902.) *Proceedings of Soc. of Antiq. Newcastle-upon-Tyne*, vol. x. p. 213. **1004**

1902. Sir George Douglas, Bart. Diversions of a Country Gentleman. 8vo, Lond., 1902. **1005**

Gives accounts of three short tours in the South-East of Scotland:—(1) Across the Border by a Disused Road; (2) A Bypath of Border Smugglers; and (3) A Motor Car on Border Roads.

1903. J. Wiglesworth. St Kilda and its Birds. An Ornithological Expedition in the summer of 1903. Five plates. 8vo, Liverpool, 1903. **1006**

1903. Arthur Grant. Rambles in Arcadia. 8vo, Lond., 1903. **1007**

Contains accounts of pedestrian excursions in Galloway, tramps over the hillsides and drove roads of the Borders, and angling expeditions in the Western Isles.

1904. C. G. Cash. Three Visits to the Garbh Coire. *Cairngorm Club Journal*, vol. iv. No. 24, Jan. 1905. **1008**

1904 *circa*. Die Berliner Range Lotte Bachs Hochzeits reise von Ernst Georgy, Berlin, 1904. **1009**

Fiction, but evidently the outcome of the author's observations. Amusing and instructive.

1905. Firmin Roz. Sous la Couronne d'Angleterre: L'Irlande, Impressions d'Écosse, au Pays de Galles. 8°, Paris, 1905. **1010**

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XIII.

NOTE ON THE DISCOVERY OF A BRONZE AGE CEMETERY CONTAINING BURIALS WITH URNS AT NEWLANDS, LANGSIDE, GLASGOW.

By LUDOVIC M'LELLAN MANN, F.S.A. Scot.

In the autumn of 1904 there were discovered at Newlands, Glasgow, two groups of burials after cremation, comprising eight deposits of bones and charcoal, four with urns.

The following note on what may be styled Group No. I. had been prepared before the disclosure of Group No. II. Group No. II. is described in a second and separate section.

Group No. I.

On 4th August, on the suggestion of Dr David Murray, I received a message from Mr J. Campbell Murray, factor to Sir John Stirling Maxwell, Bart. of Pollok, that in digging at Newlands, Langside, Glasgow, on Pollok estate, urns with bones had been discovered. That evening a meeting on the ground took place, and notes were taken of the circumstances of the discovery. Mr George Anderson, builder, who was carrying on the digging work and the erection of houses, and Mr James Auchterlonie, the foreman, both realised, on the disclosure of the first urn, the significance of the discovery: and having paid particular attention to the features revealed from stage to stage, they were able to furnish such full details that it would seem no facts of importance have escaped registration. It is largely owing to the enthusiasm of Mr Anderson that the relics were so carefully handled and preserved.

The Nature of the Ground and Locality.—The place where the burials were found is in Renfrewshire, a short distance beyond the Glasgow municipal boundary (see the plan, fig. 1), and a few yards to the east of Newlands railway station, about 20 feet from the north edge of the railway line, which at that point runs in a cutting about 5 feet deep through a slight natural elevation about 30 yards by 20 yards. Parallel

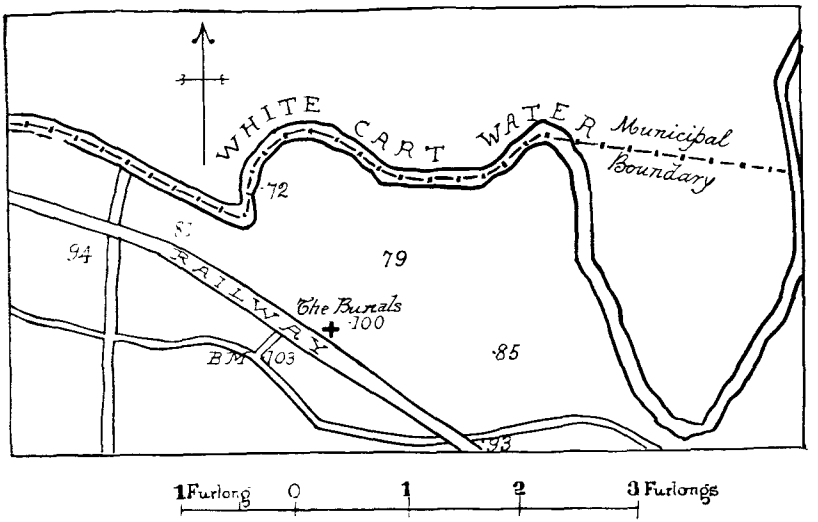


Fig. 1. General Plan showing the site of the Burials.

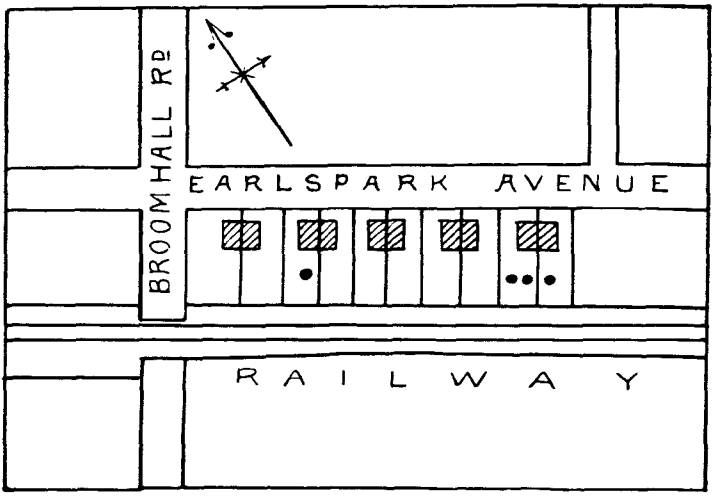


Fig. 2. Plan showing positions of the Urns.

to the railway, and at a short distance north of it, a road is being constructed. Between the road and the railway some detached cottages have been built. While excavating the soil to a depth of from 5 to 7 feet, between cottage No. 5 and the railway, the urns were discovered. From the permanent way the ground slopes slightly to the north and east. Well up on the face of the slope the urns had been buried in the positions shown on the plan, fig. 2. The place of deposit is 110 feet above mean sea-level, as kindly reckoned from the nearest bench-mark by Mr J. Jackson Wilson, for the purpose of this note.

The soil consists of dark stratified sand and gravel. At the surface there is a layer of about 12 inches of ordinary soil, which has been disturbed for many years by farming operations. Immediately below this layer, to a depth of more than 15 feet, there are strata of sand and gravel seldom quite horizontal, and sometimes much disturbed, but all by natural agencies. The sand is sharp and fine. The gravel consists of pebbles mostly much smaller and seldom larger than the human fist.

The Position and Condition of the Urns when found.

For convenience, the urns may be numbered according to the order of their discovery.

Urn No. 1.—On 12th July 1904 this urn was found, base upwards, the top portion being 15 inches under the surface. Being the first to be disclosed, its discovery was not expected, and some of the cremated bones covered by the urn were scattered in the soil and not recovered. However, a fair quantity has been preserved. The urn was found in several fragments, and has been reconstructed. Portions of the urn were found in such a position as to make it certain that the urn had stood inverted upon a horizontal surface. It was noticed that it rested upon a layer of fine sand about an eighth of an inch deep, which differed from the sand in the immediate vicinity of the layer. The layer had every appearance of having been artificially placed.

Urn No. 2.—Later, on the same day, urn No. 2 was found. It also was sunk in a pit of a similar depth, and was inverted and covered cremated bones. All the bones in this case are preserved. The urn was deposited 4 feet 6 inches to the south-west of urn No. 1. The urn was noticed to have been placed, like its companion, inverted perpendicularly on fine sand deposited in a layer about an eighth of an inch deep. This urn was also found broken, but has been reconstructed. Looking to the small depth at which these urns were placed from the surface, it is possible, as suggested by Mr Auchterlonie, that a severe frost may have been the cause of their becoming fractured.

Urn No. 3.—On 1st August, on the resumption of the digging work after the local holidays, a third urn was discovered, also inverted, at a depth of 18 inches under the surface, at a point 12 feet 6 inches from urn No. 2, and in the same relative position to urn No. 2 as that urn was placed to urn No. 1. Thus a straight line drawn through the places where urn No. 1 and urn No. 3 had been deposited, also passed through the place where urn No. 2 was found.[1] The compass indicated the direction to be about 20° west of north (mag.), or nearly north-north-west and south-south-east (mag.). The quantity of bones covered by urn No. 3 much exceeded the quantity associated with urn No. 2. No comparison in this connection can be made with the osseous remains found with urn No. 1, as only a portion of the quantity covered by that vessel has been preserved.

The bed upon which No. 3 rested did not appear in any way to have

[1] *The arrangement of urns in a line.* In describing the discoveries of cinerary urns deposited in groups in shallow pits, and without protecting structures of stones, most writers have omitted, among many other things, to mention the manner of arrangement of the urns. The vessels in one group found in the Parish of Creich, Fifeshire, are mentioned as having been found "crowded together" and irregularly placed (*P.S.A.S.*, vol. vii. p. 406). In one instance the vessels were disposed in a circular manner (*P.S.A.S.*, vol. vi. p. 338) As mentioned, the three Newlands urns were deposited apparently in a straight line. It is interesting to note that at least two other cases (*Proceedings*, vol. vii. p. 405) have been recorded where the arrangement was somewhat similar. In more than one case the direction of the line lay east and west approximately.

been artificially prepared, further than that the soil had been excavated to receive the vessel.

The Simplicity of the Interments.—No stones whatever seem to have been built up or set in position in association with the urns. No artificially worked objects were found other than the urns, and there was apparently an absence of layers of wood ashes and of deposits of bones without urns. The bones and earthy matter have been carefully sifted and examined.

The Material of the Urns.—The urns have as usual been made without the aid of the wheel, of clay into which have been worked small fragments of pounded-up stone which are evenly distributed throughout the material. The fragments appear rarely on the surface, especially the exterior surface. The vessels have been fire-hardened after being decorated and are of a pale yellowish colour. The pounded-up stones would strengthen the walls and prevent the cracking of the vessels during the firing process.

Wood Charcoal.—One or two very small pieces of wood charcoal were detected among the bones covered by urn No. 2. The presence of only a few particles of charcoal with the bones, and the apparent absence of charcoal in the soil immediately round the urns Nos. 1 to 3, indicate that the process of cremation did not probably take place upon the spot where the urns were buried.

The Probable Presence of Bronze.—I observed a stain of a bright green colour on a vertebra associated with urn No. 2. This may indicate that a bronze implement or weapon had been deposited with the remains.

The Ancient Excavations.—The extent of the disturbance of the soil above and round the urns was not observed, and it is not therefore possible to say definitely how far horizontally the prehistoric excavators had worked in digging holes for the deposit of the vessels.

Vertically they did not go far; and assuming the level of the prehistoric surface not to have materially changed since the time of the interments, the cavities made for urns Nos. 1 and 2 could not have been more than 2 feet each in depth, and for urn No. 3 not more than 3 feet

in depth. The size of the urn seems thus to have in some measure dictated the depth of the excavation, the largest urn, No. 3, having apparently been set more deeply than its companions.

The Shape and Decoration of the Urns.

The Newlands urns belong to a well-known type of cinerary urn, and are to be assigned to the Bronze Age. The contour of this pottery-type is usually that of two truncated cones (of about equal diameter at their widest) set base to base with an interpolated zone which is very often constricted. The constricted part and the upper cone are, as a rule, of nearly equal depth. In each case the lower half of the vessel is plain, with flat base and like a flower-pot, though generally having somewhat more rapidly expanding walls. The walls rise from the base sharply, without rounding off, at an angle of about 50 degrees, to a point about half-way up the height of the vessel. It is on the upper half of the vessel that the potter has displayed his capabilities as artist. The presumption that the prehistoric potter was a male is perhaps unwarranted, as there is evidence derivable from other discoveries of urns, such as the small size of the finger and nail imprints on the clay, which points to women having been the potters, as they are recorded to have been in some primitive communities.

The upper half of each vessel from group No. I. is divided into two equal and distinct zones, the demarcation between the zones being emphasised by the overhanging brim.

Urn No. 1.—Urn No. 1 (fig. 3) stands about 11½ inches high, measures 9 inches outside across the mouth, and has a base 4 inches in diameter. In this urn the second or lower zone is destitute of ornament, and is bounded on its lower side by a plain moulding, and the outline of its surface is a harmonious continuation of the contour line of the lower half of the vessel. This is not a common feature, as the lower zone is usually pronouncedly constricted or waist-like. The higher zone, the contour line of which slopes inwards, is bounded on its upper margin by the rim of the vessel, and is divided from the lower zone by

the overhanging ridge already mentioned. The higher zone has been filled in by two series of lines incised by some sharp-pointed implement before the clay was fired, each line of one series crossing diagonally the neighbouring lines of the other. The lines of each series have an obliquity of about 40°. Each line intersects from 3 to 4 of its immediate non-parallel neighbours, these being placed two in the space of an inch, and the depth of the zone being 2 inches.



Fig. 3. Urn No. 1, Newlands. (¼)



Fig. 4. Urn No. 2, Newlands. (¼)

The rims of all three urns are ornamented and are bevelled inwards, the angle of the inclination being about 45 degrees. The rim of urn No. 1 is about half an inch broad, is fully occupied by a design of incised lines in two intersecting sets of zigzags, forming a series of equal-sized lozenges, centrally placed on the rim, and having their longer axes parallel with its edges.

Urn No. 2.—This urn (fig. 4) measures 12 inches in height; the outside measurement across the mouth is 10 inches, and the diameter of

the base 4½ inches. It has a similar overhanging upper zone but a plain constricted lower zone. The upper zone has arranged upon it lines formed when the clay was still soft by the impressions of what at first sight look remarkably like a number of seed vessels attached on each side of a mid-rib, like small heads of degenerate wheat, or of some cereal grass. The impressions, of which a photograph of the actual

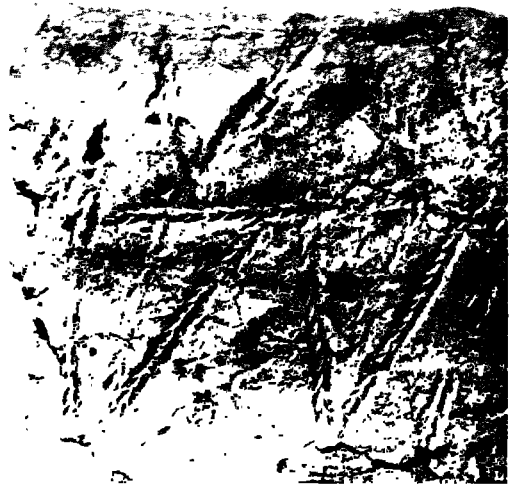


Fig. 5 Photograph of the markings on the upper part of Urn No. 2. (Actual size.)

size is shown in fig. 5, are made to form a pattern in zigzags, and they also occur in irregular groups.

The rim of urn No. 2, like that of urn No. 1, is about half-an-inch broad and has on its outer edge a line of impressed cord pattern like the impressions just mentioned, but the rest of the surface of the rim is occupied by a symmetrical single zigzag line made by the impression of a cord formed by two strands twisted. The line is more compactly set than the zigzag lines on the rim of urn No. 1, the component straight lines being about three-fourths of an inch long.

A question having arisen as to the nature of the object employed to impress the markings upon the upper zone of urn No. 2, the fragments of the urn were shown to Dr F. O. Bower, Regius Professor of Botany in the University of Glasgow, who kindly reports that he has found great difficulty in coming to any conclusion, and states that the suggestion he makes, viz., that the impressions are those of some gramineous ear, is of a very tentative nature, and far from being a conviction in his own mind. Of grasses, the nearest which Professor Bower suggests is one of the small spelts, e.g., *Triticum monococcum* (L.), or *Triticum Spelta* (L.), which grains were in very early cultivation.

Mr Peter Ewing, F.L.S., who kindly undertook an examination of the markings, is of opinion that they are not those of a naturally grown object, because (1) a rachis with its attached flowers or grains would give a more regular impression than these markings, in which the lobe-like hollows are not equally apart; and (2), the direction of the *striæ* perceivable in some of the hollows is not coincident with, but runs obliquely to, the direction of the longer axis of the hollow. Mr Ewing conjectures the markings are the result of a gouging-out of the soft clay (before it was hardened) by means of a tool, possibly of bone.

As the question is important, and bears upon the cultivation of cereals in Britain during the Bronze Period,[1] and Dr Joseph Anderson having suggested the possibility of a four-plaited cord having been the object used, the following experiments were carried out. Cords were plaited in 3, 4, and 5 regular plaits. An impression of each of the three plaitings was made in soft clay which was afterwards hardened by fire. Casts of these impressions were then taken. Casts were also made of the markings on the urns and casts of these casts taken. Thus the markings, ancient and modern, and both sunk and in relief, could be compared.[2]

[1] Dr Joseph Anderson calls my attention to p. 111 in Mr Mortimer's recently published *Forty Years' Diggings*, where there is recorded the occurrence of part of a head of wheat enclosed in the clay forming the wall of a "food-vessel," and charred in the firing.

[2] A comparison of the decorative schemes on the rims of urns No. 1 and No. 2 reveals that the artist spread out the zigzags on rim of No. 1 where it was double, and

The comparison showed that the prehistoric potter used a four-plaited cord. The sinuosity of the markings, the forking of some of the cords where the component strands have become loosened, and the length of some of the markings, which run without a break for $2\frac{3}{4}$ inches, being out of proportion to their breadth if considered as impressions of an ear of grain, all indicate that a cord has been used.[1] The impressions, when viewed in relief



Fig. 6. Markings on Urn No. 2. (Enlarged four times.)

and under a lens, were particularly instructive, as the various strands could be traced as they ran under and over from one side to another. A photograph of some of the markings enlarged four times is shown in fig. 6.

selected a series of less obtuse angles for the single line on the rim of No. 2, supplementing the comparative meagreness of the single zigzag by a plain line on the margin. In each case practically the same degree of fulness in the decorative effect is reached, but by different means. The work in each instance finishes off at the same point—a point, by the way, at which the modern decorator has seldom the good taste to call a halt. Identical artistic impulses seem to have imbued the mind of each of the artists; or not improbably the two rims were decorated by the same hand.

[1] In an Appendix (p. 551), the results of further experiments are described.

Urn No. 3 is not only the largest of the three, but is one of the largest sepulchral vessels recorded from Scotland. It bears more decoration than its two companion urns.

The contour of the lower zone is much constricted, being pronouncedly



Fig. 7. Urn No. 3, Newlands. (¼.)

concave. That of the higher zone slopes inwards till its termination at the rim, and betrays slight convexity. The outside diameter of the mouth is 15 inches. The height of the vessel (fig. 7) is 18 inches, of which 11 inches are taken up by the plain lower part, the remaining 7 inches being occupied by the upper and lower zones, which are $3\frac{1}{2}$ and 4

inches in depth respectively. Both zones are filled with straight lines of the impressed twisted cord pattern. In the lower, the lines run at a slight angle from the perpendicular, and as is usual run from left to right and are roughly parallel to each other and equi-distant about 1 inch.

In the upper zone the lines run up and down in a treble zigzag, and are placed about 1 inch apart, the change in direction of the line taking place at distances of about 1 inch. As is usual in the pottery decoration of the Scottish Bronze Age, each line seems to run first from left to right, beginning at the top of the zone.[1] The ornamentation of the rim of this urn consists of a zigzag line of the usual twisted cord pattern. The design is well spread out and the angle formed by the lines very obtuse, the surface available for decoration being just a little over half an inch in breadth, and the straight lines composing the zigzag being $\frac{3}{4}$ inch long.

Inferences from the Position and Shape of the Urns.—It cannot be stated whether, at the period of the Newlands deposit, the urn was more frequently inverted than placed in a normal position. Both fashions have been noticed to occur in the same cemetery and with what were almost certainly contemporary burials. To secure the contents, slabs of stone were not unusually placed over the urn when it stood upright, and under the urn when it was inverted. I have discovered one instance where an urn (bucket-shaped and plain), containing apparently incinerated remains, had been placed on its side, and a small flat stone set upright against the mouth, and a "kit" of flint tools placed in the soil above the vessel.

The Employment of Urns of Large Size.—Urns of a cinerary type are larger than those of any other kind. It seems certain that as the size of the vessel increased so also would the potter require to exercise

[1] By a study of the direction, overlapping and general character of the impressed and incised lines on prehistoric pottery, a fairly accurate conclusion can be drawn as to the methods of the artist—what lines he first sketched in, and what were the finishing touches, and it may be possible at times to tell whether he was right or left-handed.

greater skill and expend greater labour. The occurrence of sepulchral vessels of abnormally great dimensions is nevertheless possibly quite accidental.[1]

Sepulchral clay vessels in Scotland rarely exceed 15 inches in height.[2] The other classes of British Bronze Age ceramic found with interments, "Food Vessels," "Drinking Cups," and "Incense Cups," to use the fanciful names which have been invented, are all much smaller. In the south-east of Spain, MM. Henri and Louis Siret discovered specimens of a type of large sepulchral urn containing unburnt human bones, which have been assigned to the Bronze Age in Spain,

[1] No theories have apparently been formulated as to why urns of exceptionally large size, such as urn No. 3, should have been employed. It may be, however, that there was some special reason for their manufacture. The most likely of the factors which may have entered into the choice of the size of an urn are perhaps worthy of examination.

(1) A very large size may have been intended to indicate the importance of the deceased; or

(2) may have been meant to testify to the exceptional esteem or veneration in which the individual was held: or

(3) may have been supposed necessary from the large stature or proportions of the deceased; or

(4) may have been intended to contain the burnt bones of more than one individual; or

(5) to contain, in addition to human bones, the skeletons, or part of the skeletons, of animals.

No case seems to have been found in the British Islands of an unburnt human skeleton having been deposited in an urn.

If it be found possible to demonstrate, after the accumulation of more data than is presently available, that there is as a rule more elaboration in the super-structures or in the grave-goods associated with cinerary urns of large size, than in those of small size, perhaps we should learn whether the suppositions 1 and 2 have any foundation in fact.

Careful examination of the osseous contents should, however, throw light on the suggested causes given under headings 3 to 5. The most unlikely supposition of all is certainly that offered under the fifth heading. Yet, such are the surprises met with in the study of prehistoric Archæology, that actual examination seems to indicate grounds for suggesting that the abnormal cubical capacity of some urns, if intentional, was arranged to allow osseous fragments belonging to the lower animals being interred in the same vessel with human remains.—(*P.S.A.S.*, vol. vii. p. 372.)

[2] I have been able to obtain a note of only 20 Scottish cinerary vessels, the height of which exceeds 15 inches.

if not to an earlier period. The diameter at the mouth in the case of some of these urns exceeds 26 inches. It is thought that such large urns may have been moulded in sections, which were put together when the clay was moist.

Group No. II.

On Friday, 16th September following, I was apprised of the discoveries of five additional deposits, these having taken place on the preceding Tuesday and Wednesday. As in the previous cases, I was unfortunately absent at the time of the discoveries, but Mr Anderson and Mr Auchterlonie were again able to furnish details, and having previously read the note on Group No. 1, they were aware of the facts which it was desirable to record.

The Disposition of the Deposits.—When excavating at about the same distance from the railway as the first discoveries, and 83 yards to the west of that place, an urn with burnt bones, and near it four pits without traces of pottery, but with wood charcoal and bones, were found. These five deposits may be numbered 4 to 8, in the order of their coming to light.

As explained by Messrs Anderson & Auchterlonie, either one or other of whom was present at the disclosure of the remains, deposits Nos. 5, 4 and 8 were placed in a straight line, as were also Nos. 6, 4 and 7, the centre of the group having been No. 4. A line through 5, 4 and 8 was at right angles to a line through 6, 4, and 7. Reckoning the measurements from the centre of each deposit, Nos. 5 and 8 were each 5 feet distant, and 6 and 7 each $2\frac{1}{2}$ feet distant from No. 4. This disposition is curiously symmetrical. A line through No. 8 and 5 lay about 2° north of north-west (mag.). The cottage in the back-garden of which Group No. II. was discovered, is the second double cottage south-east of the junction of Broomhall Road and Earlspark Avenue. A line from deposit No. 4 drawn towards and at right angles to the back wall of the cottage meets that wall at a point 4 feet 6 inches from the west corner of the cottage, and measures 30 feet 6 inches.

Urn No. 4.—When discovered the basal portions of this urn were wanting. The greatest care was taken in noting the details of the position. The surrounding gravel was first removed and the urn exposed down to the rim, when it was seen to have been placed in the usual inverted position. It was found impossible to lift the urn in one piece as the walls were fractured. The pieces were, however, in their original position, and after they had been cautiously removed there was revealed a core consisting of an intact, fairly compacted mass of black earth, wood ashes, and bones. Some sand and gravel was also present in the core, and had probably been washed in through the imperfect basal part. Rain water had no doubt obtained access also, and may have assisted in increasing the solidity of the core. Mr Anderson sifted and washed through a sieve some of the material of the core, but noticed nothing of special note, except a number of human teeth. The urn had been set in a cavity excavated for it. As if to allow the vessel to rest upon a secure foundation, eight water-rolled stones of different sizes, shapes and material, none having a larger dimension than 5 inches, and the smallest having a maximum dimension of 2 inches, were found, in a somewhat circular manner, in the same plane, at the bottom of the cavity, so that the rim of the vessel rested on the stones. The coarseness of the gravel in which the deposits of Group No. II. were found may account for the employment of the stones. It would be less easy in gravel than in sand to obtain a flat and secure bed for an urn. Further than the placing of eight stones there was no prepared foundation. No stone was placed against the side of the urn nor in the centre of the floor of the cavity. The prehistoric diggers had evidently made a pit of a size just sufficient to contain the urn.

On the disclosure of urn No. 4, it was noticed that the mass of black earth, wood ashes, and burnt bones which was seen to have formed a core, was not spread over an area greater than that covered by the urn. This apparently indicates that the materials referred to were contained in the urn when it was deposited, and that they were not interred

prior to the urn being placed in position over them. This evidence is, however, perhaps insufficient for the belief that before its burial the urn had its contents sealed up by some perishable covering placed over its mouth.

The contents of the urn in this case seem to have filled the urn. If only a small quantity of material be found inside an inverted urn, then it is conceivable that the material to be covered was simply gathered in a small heap, and the urn, then empty and without a cover, placed over

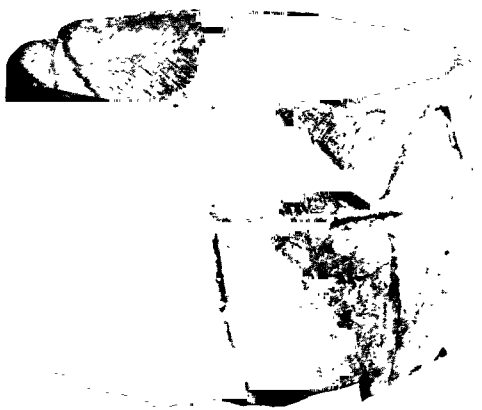


Fig. 8. Urn No. 4, Newlands (½).

the material. The rim was at a depth of 20 inches from the modern surface. The nearness of the base (which was uppermost) to the surface may account for the basal portions having disappeared.

The decoration of urn No. 4 (fig. 8) is of unusual richness. The absence of any deep overhanging rim, or of a constricted second zone, or of any sudden changes in the contour line, is compensated for by the rare feature of bold work in relief. The ornamentation is not confined to two zones or horizontal panels, as so often happens. There are indeed four zones, and one of these is again subdivided, but not pronouncedly. The decoration extends apparently very nearly to the base, an unusual

feature, but its limit downwards is unknown, as the basal portions are wanting. Sufficient fragments remain to show the contour and decoration to a point 12 inches downwards in vertical height from the rim. The inner and outer diameters at the mouth have been 13 and 14 inches respectively. The rim is plain, with a slight inward bevel. The contour line of the first or topmost zone extends slightly outwards, neither bulging outwards nor inwards, to a point $2\frac{3}{4}$ inches from the rim, whence it curves rapidly outwards for about an inch. It then proceeds convexly inwards and downwards in a full uniform curve to a point at which the lower portion of the vessel has broken off. Three horizontal mouldings occur. The first marks the boundary between the topmost zone and the lower parts of the vessel.

Four inches beneath the first moulding is a second, while 5 inches still lower is a third moulding. The mouldings have been formed by laying on to the body of the wall rounded strips of clay about $\frac{1}{4}$ of an inch in diameter, while the clay of the wall and that of the strip were still soft. As can be seen at places where the strip has since been broken off, the potter drew a shallow gutter along that part of the surface of the walls to which he (or she) intended to affix the strip of clay.

The gutters, which are about one-tenth of the breadth of the moulding, may have been made to assist to secure the strips of clay in position, but it is also probable that they were merely preliminary sketchings-in to indicate where the mouldings were to be laid. So far as the exterior of the vessel is concerned they were made apparently before any of the other lines were incised, as the lines incised in the interior of the panels sometimes cut into the mouldings.

After the strip was in position it was apparently carefully worked with the fingers into the body of the wall, keeping it, however, always in high relief, though making it usually a little broader than high. The topmost or first zone is, as usual, more lavishly decorated than any other part. There, over the interior of the zone, are laid similar strips of clay, forming a zigzag line in relief which ranges over the

whole depth ($2\frac{3}{4}$ inches) of the zone and runs at angles of about 45° to the line of the rim.

The triangular spaces thus formed appear of course as if counter-sunk. Each space is filled with roughly parallel incised lines, about three in the space of an inch. The direction of the lines in each space has been skilfully chosen so as to produce the maximum amount of variety, the lines in one space not running in the same direction as those in the immediately adjoining spaces. This harmonious effect is strengthened by the direction being parallel to one or other of the sides of the triangular space.

Zone No. 2 is, as mentioned, bounded below and above by lines in relief. A contrast has been produced in it by having lines in relief placed perpendicularly at distances of about 4 inches from each other. This interior relief-work is of less extent than the work in relief in the interior of zone No. 1. This is in conformity with the artistic impulse which, during the period of the Bronze Age, almost invariably dictated that the lower the zone the less importance it should have. These vertically placed mouldings are arranged to coincide with the apex of a triangle of the topmost zone. There is thus the pleasing effect of five lines in relief meeting at the same point. The rectangular, counter-sunk panels in zone No. 2 which are thus formed by the vertical and the horizontal mouldings are filled with groups of incised lines which are placed parallel, about $\frac{1}{4}$ of an inch apart. Each group is somewhat irregularly placed, and the component lines of one run in directions different from those of its immediate neighbours.

The third zone (of which the fragments are now lost) was bounded by mouldings, and deeper than zone No. 2, but had no relief work in the interior. It was thus given less decorative value than either of the upper zones. There was a single incised line running horizontally and carefully placed medially. From this middle line were two series of incised lines filling the entire space. One series, that in the lower sub-panel, ran downwards and at an angle of 45° from right to left, while those of other series (those in the upper sub-panel) ran upwards

at the same inclination from right to left. The lines comprising each series were carefully drawn parallel to each other and about $\frac{1}{4}$ of an inch apart. The whole formed a herring-bone ornamentation.

Beneath this zone were fragments of the wall showing another zone with lines incised and running at an angle of 45° and parallel to each other, but the character of the decoration was indeterminable, owing to the destruction of the basal portions.

The mouldings are at times decorated by the impression of some blunt-pointed tool.

The inside of the rim, corresponding to the whole area of the topmost zone (which is $2\frac{3}{4}$ inches deep), is decorated by lines made by a tool with a somewhat frayed-out, broad point, possibly a reed or twig with a roughly fractured end.

The tool scraped out a passage as it was drawn quickly along the surface of the soft clay. The character of the passages is similar to the little gutters, already described, found underlying the strips of clay forming the mouldings on the exterior of the vessel. The passages are arranged in the familiar herring-bone pattern, but there is no medial line, its place being taken by a slight thickening of the wall at the centre of the panel, the areas below and above the thickening being somewhat concave. In cinerary vessels ridges such as this occasionally occur round the interior near the rim, but their use, if they were not purely decorative, is not clear. They may have been intended to support a circular plaque or cover, fitted into the neck of the vessel to protect the contents.

Deposit No. 5.—For a distance of about 15 inches immediately under the surface it was impossible to trace the ancient excavation owing to disturbances in the superficial soil. Beneath this superficial layer it was seen that the pit extended to a further depth of 9 inches and that it was oval, being 27 inches by 21 inches, the longer axis of the oval lying in a direction towards deposits Nos. 4 and 8.

The coarseness of the gravel made it somewhat difficult to make out the exact lines of demarcation of the area of the ancient disturbance.

There were no built-in stones or traces of pottery or of a prepared floor. The pit, from a depth of 15 inches downwards to its base, was filled with black earth and wood charcoal, but of osseous remains there were only faint traces.

The other Deposits in Pits.—Of the other pits, No. 6 was slightly oval and of similar dimensions to No. 5; No. 7 was circular and the smallest, being only 12 inches in diameter: and No. 8 was circular and about 24 inches in diameter. The depth in each case did not materially vary, but No. 6 had a depth of only 6 inches of filled-in material under the superficial layer of 15 inches of disturbed soil. In this pit some pieces of charcoal of unusually large size, being about 1 inch in diameter, were found. On portions of the contents of the pits being washed by Mr Anderson, osseous fragments and gravel only were noticed.

It is not unusual to find burials after cremation without urns in the same cemeteries with urn-burials. Possibly, indeed, they are more common than the records show, as doubtless such simple burials would often remain undetected. Burnt osseous remains buried without urns are naturally not so well preserved as when protected by urns.

The Relationship of the five Deposits.—It seems almost certain that in Group No. II. all the deposits are separate burials. Their symmetrical disposition seems to point to their having been contemporary, but whether broadly or precisely so is a difficult question. The very fragmentary condition of the osseous fragments in the urnless burials (if burials they were) will make it probably impossible to say what class of osseous remains were placed in the pits. The smallness of the cubical capacity of pit No. 7 is worthy of note.

Wood Charcoal.—The wood charcoal from deposits Nos. 3 and 4 was submitted to Professor Percy Groom, who was good enough to undertake its examination. In the case of the charcoal from No. 3 the pieces were found to be too small to be satisfactory, but in the case of No. 4 Professor Percy Groom was able to arrive at some conclusions and reports as follows:—"First, it is wood of a broad-leaved (dicotyledonous) tree. Secondly, it is not oak, chesnut, ash, elm, hornbeam, hazel, plane or

beech. Thirdly, I think that it is alder. To determine this wood absolutely—if it be possible—would require more time than I can devote to the question. I might, however, recommend you to send the wood to Mr Stone, who is a specialist on timber structure, and if he, after a more prolonged examination and more detailed one (by cutting the specimen pieces), arrives *independently* at the conclusion that the wood is *alder*, then I think you may regard it as certain. Of course it is a difficult bit of work, as it is impossible to see the colour, know the hardness, or ascertain the fine microscopical structure of the wood."

Following Professor Groom's suggestion, Mr Herbert Stone, F.L.S., was communicated with. He says, "I have failed entirely to obtain a section, without which I can offer no certain opinion. The resources of the Biological Laboratory at the Birmingham University have been placed at my disposal without avail. None of the demonstrators can do anything with the charcoal, which is too soft and crumbling. From a superficial examination with a lens, I conjecture that the wood is alder."

Report on Burnt Bones from Newlands, Langside, Glasgow.

By Thomas H. Bryce, M.D., F.S.A. Scot.

The material submitted to me for examination by Mr Ludovic M'L. Mann consists of four separate deposits found under cinerary urns, and three bags of gravel, osseous debris, and pieces of charcoal collected from the pits placed round one of the urns.

The osseous fragments from all the deposits have the typical appearance and fracture of human bones calcined by cremation. The fragments which were protected from contact with the soil by the urns have a chalky white surface, while those which lay under urn No. 4 and those collected from the gravel in the pits have the dark colour of burnt bone found in the soil.

The bones forming each deposit were carefully examined, and those which could be accurately identified selected. A number of these furnish data regarding the age, and in some cases even the sex, of the individual. In cremated interments the shafts of the long bones and ribs are always broken into small cracked and often twisted fragments. The articular extremities have generally resisted the fire more than the

shafts, and portions remain which enable one to determine whether ossification has been completed. Frequently—and this has always struck me as a curious circumstance—some of the phalanges, though burnt through, remain entire. The bodies of the vertebræ are often partly preserved though the processes are broken away. In the skull, as might be expected, it is generally the petrous temporal which has shown most resistance to the fire, while the other bones of the base and the vault are only represented by small pieces. Some portion of the lower jaw is generally present, and the teeth, though completely calcined, are sometimes preserved entire.

Urn No. 1.—This deposit is represented by a few fragments. Certain of them show that the individual was of adult age.

Urn No. 2.—The bones are specially white, as if they had been more completely protected than in the other cases. All the fragments are said to have been preserved, but except on the supposition that a considerable part of the skeleton had been reduced to fine ash, the existing remains can hardly be taken to represent the whole of the bones. Some whole phalanges show that their epiphyses were united, so that the individual must have passed the 20th year: but a portion of the base of the sacrum shows that the first and second segments have not been completely united, so that the age can be determined as being about five and twenty.

Several of the bones show light green stains.

Large Urn No. 3.—This deposit is specially large. The bones are greyish in colour, a few are grey-black. The fragments are of large size. There are remains of about 19 vertebræ. They are under the average size, and some of the metacarpal and metatarsal bones and phalanges which have been preserved are slender bones. The epiphyses of these bones have united so that the person cremated had reached adult age.

One of the temporal bones is represented by the petrous and mastoid portions. The mastoid process is very slightly developed, and this, taken in conjunction with the slenderness of the bones of hand and foot, and the complete union of their epiphyses, point to the individual having been a woman.

There are slight green stains on several of the bones.

As the urn containing this large deposit was of exceptional size, it might be supposed that the burnt bones represented two skeletons. There is not, however, a greater mass of fragments than would be accounted for by the cremation of a single person, provided that the greater part of the skeleton had not been reduced to fine ash. The large size of the pieces, and the number of vertebræ which have not been reduced to small particles, point to some special form of treatment.

such as a less fierce fire or one of shorter duration, which enabled the executors to gather the remains more completely together.

No single fragment which can be identified has a duplicate which cannot be referred to the opposite side of the body, so that one is forced to the conclusion that the deposit represents the cremated remains of a single individual. Again, no bone occurs which can be identified as that of an animal.

Urn No. 4.—The deposit found in association with this urn reached me in the form of a mass of small gravel with burnt bones intermingled with the stones. When collected, the osseous fragments were found to be much broken and of rather darker colour than in the cases of the deposits already described, a fact which is explained by the circumstance that they had, according to the account given, come into contact with the soil which had gained access through the broken basal portion of the urn.

Portions of the bones of hand and foot show that the epiphyses had united. The amount of osseous debris can hardly be taken to represent the remains of an entire skeleton. There are no bones which cannot be attributed to the human subject.

Deposits from the Pits round Urn No. 4.—These were submitted to me in two lots mixed with the gravel which filled the pits. The deposits consist largely of fine osseous debris and the smaller sort of fragments which occur in the urn deposits. They have the dark colour of burnt bones deposited in the soil, but in every other respect are identical with the osseous remains found under the urns. They are, however, very much broken up, and it is noticeable that a relatively large number of the small bones of the hand and foot seem to be present.

Collected together, all the fragments from the four pits do not equal in amount the mass of bones in the urn deposits. I have examined certain burnt interments, and that in urn No. 3 of this series is a case in point, where most of the skeleton appears to have been collected into the urn. In cases where only a portion of the debris of the bones appears to represent the result of the cremation, it may readily be supposed that much of the bone had been reduced to fine ash; but, on the other hand, it may also be supposed that it would be a matter of difficulty to gather the finer debris from the ashes of the funeral pyre, and that the fragments of burnt bone deposited in, or under the urn represent only those readily collected. In this connection I may say that the fragments from urn No. 4 and the four pits do not much, if they at all exceed in amount, those recovered under urn No. 3, and I would suggest as a possibility, from my examination of the remains, that the deposits in the pits may not represent separate interments, but only the finer debris of the cremation.

APPENDIX.

Experiments were carried out to throw light on the nature of the material of the four-plaited cord which had been applied to the wall of Urn No. 1.

Impressions on soft clay of various similarly plaited vegetable and animal fibres were compared with the ancient markings, and some conclusions arrived at.

Tendons and Fibres of Animal Origin.—The presence of *striæ* on the ancient markings indicates that the ancient cord consisted of either four solid strands with corrugated surfaces, or of four strands each made up of a number of filaments twisted upon one another. Four solid strands, possessing a corrugated surface such as characterises a thickish animal tendon, would, however, give more continuous, certainly more pronounced, *striæ* than those to be seen on the ancient markings. The prehistoric strand would therefore seem to have been not solid, but composed of a number of filaments.

A cord with strands of horse hairs twisted did not give impressions like the urn markings, the individual hairs producing *striæ* far too clear and harsh. For similar reasons human hair was rejected, as not among the materials probably used by the prehistoric potter.

Wool presented a little difficulty, owing to the number of its varieties and the various methods of its preparation. Woollen yarns, oiled and not oiled, "long" and "short," in plies of three and four, were four-plaited as nearly as possible to the degree of compactness of the original cord. The different yarns, while in each case giving a cord of the required thickness, betrayed too great an elasticity and an insufficient power of resistance when pressed against the clay, and gave impressions much less definite than those on the urn.

But a more noteworthy difference was brought out between the character of the material of the ancient cord and that of the woollen yarns experimented with. The wool left always upon the clay the impression of a felted surface, caused by the *lamina* or feathery off-shoots of the wool getting pressed together and interlacing themselves irregularly at the moment the wool was pressed into the clay. Such felted surface is not observable on the ancient markings.

Vegetable Fibres.—A plaiting of four piths of the common rush (which was found difficult to make, owing to the brittleness of the material) gave impressions too large.

As there were found at Lochee Crannog (*P.S.A.S.*, vol. xiii. pp. 198, 237, and 246) articles like fringes or girdles, and a four-plaited

object like a cue or pigtail, all made by plaiting the stems of the moss *Polytrichum Commune* (L.), this moss was experimented with.

Mr John Renwick kindly supplied specimens of the moss. The stems were easily freed from the short, hairy leaves, but, in spite of the most careful preparation, small irregularly-placed scales persisted in adhering to the stems, and produced on the clay cross lines and irregularities. Further, the stems were too stiff. It seems clear this moss was not the material used upon the surface of the urn. Flax tow, however, gave impressions similar to the ancient markings, especially when in the plaiting the fibres were slightly moistened. The tow had a solidity, and yet a pliability, a thickening here and there of the fibres, and a surface fairly free from feathery and straggling filaments—features all apparently characteristic of the material which was called into service by the decorator of the urn. Flax tow (and linen) were not improbably known in Britain during the early phase of the Bronze Age.

A body swathed in linen was found in a cist with relics characteristic of the Early Bronze Age at Driffield, Yorkshire (*Archæologia*, xxxiv. p. 255). An urn of overhanging rim type, discovered at Durrington, Wiltshire, contained burnt bones which had been wrapped in coarse linen cloth woven with a double thread both of warp and woof. The form of the fibres has survived, owing to a deposit upon the fabric of carbonate of lime derived from the bones. These relics are in Devizes Museum. (*Anc. Wilts*, p. 168; *Wilts. Arch. Mag.*, xxi. p. 261; *Devizes Mus. Cat.*, p. 56.) In Bush Barrow, Normanton, Wiltshire, was found a flat axe of bronze, with almost imperceptible flanges, bearing on its surface traces of coarse cloth, as if burnt into the metal. I was informed at Devizes Museum, where this axe is preserved, that the cloth was probably of linen. (*Anc. Wilts*, p. 203, pl. xxvi. *Devizes Mus. Cat.*, p. 38.)

Mr B. Howard Cunnington, F.S.A. Scot., Devizes, to whom the above references to linen were submitted, kindly calls my attention to the following four other instances of linen cloth found in England with burnt interments in barrows of the Bronze Age. Very fine linen was found by Canon Jackson in a barrow at Winterslow, near Stonehenge (*Wilts. Arch. Mag.*, xxi. p. 346). Sir Richard Colt Hoare refers to an interment of burnt bones, secured by a linen cloth, under a rude urn (*Anc. Wilts*, p. 169); to a large sepulchral urn associated with "several pieces of decayed linen, of a reddish brown colour, lying like cobwebs on the calcined bones" (*Anc. Wilts*, p. 242), and on the same page to a broken urn associated with "an interment of burnt bones, over which was a considerable quantity of decayed linen cloth."

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